RESEARCH PROJECT FOR:

NYSTAR

STATE INTELLECTUAL PROPERTY POLICIES

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TABLE OF CONTENTS

E .	xecutiv	e Summary	1
In	troduc	tion	2
1	Fed	eral Intellectual Property Policies	3
	1.1	Bayh-Dole Act	3
	1.1.1		4
	1.2	IRS Revenue Procedure 97-14	8
2	Inte	llectual Property Commercialization Environment	10
	2.1	Industry Push-Back on University Research and Development	10
	2.1.1		
	2.1.2	Reasons for Not Participating in Sponsored Research	11
	2.2	Off Shore Research and Development	13
	2.3	University Research and Local Economic Development	14
	2.3.1		14
	2.3.2		17
	2.3.3	Factors Outside the University Affecting Economic Development	23
	2.4	AUTM Data and Analysis	26
	2.4.1	•	28
	2.4.2	1 11	
	2.4.3		
	2.4.4		
	2.4.5		
	2.4.6		
	2.4.7	•	
	2.5	Intellectual Property Ownership Initiatives	47
	2.5.1	Introduction to Open Source	47
	2.5.2		48
	2.5.3		51
	2.5.4	IBM Open Source Initiative	53
3	Cali	fornia Intellectual Property Report	56
	3.1	Background	56
	3.2	Findings	56
	3.3	Intellectual Property Objectives	58
	3.4	Recommendations	59
4	Neu	York State Intellectual Property Policies	
	4.1	University IP Policies	62
	4.1.1	SUNY and the Research Foundation	
	4.1.2		
	413		

	4.2	Specialized Funding Agency IP Policies	
	4.2.1		73
	4.2.2	NYSERDA	77
	4.3 4.3.1	Technology Transfer Offices Affiliated with New York State Agencies NYS Department of Health/HRI	79 79
	4.4	NYS Assembly - IP Policy Activities	80
	4.4.1	Assembly Bill 3017	80
	4.4.2	Assembly IP Policy Roundtable Meetings	82
5	Ovei	view of State Intellectual Property Policies	83
	5.1	University IP Policies	83
	5.2	Specialized Funding Agency IP Policies	85
6	Sum	mary of State Intellectual Property Policies	85
	6.1	Alabama	85
		University IP Policies	
	6.1.2		
	6.2	Alaska	87
		University IP Policies	
	6.2.2		
	6.3	Arizona	88
		University IP Policies	
	6.3.2		90
	6.4	Arkansas	90
		University IP Policies	
	6.4.2		
	6.5	California	92
		University IP Policies	
	6.5.2		
	6.6	Colorado	95
		University IP Policies	95
	6.6.2		96
	67	Connecticut	96
	6.7.1	University IP Policies	
	6.7.2	Specialized Funding Agency IP Policies	98
	6.8	Delaware	98
	6.8.1	DelawareUniversity IP Policies	
	6.8.2	Specialized Funding Agency IP Policies	
	6.9	Florida	 99
	6.9.1	University IP Policies	99 99
	6.9.2	Specialized Funding Agency IP Policies	
	6.10 6.10.	Georgia University IP Polices	100 100
	6.10.2		
		II ama!!	103
	6.11 6.11.	Hawaii University IP Policies	
	6.11		104

6.12	Idaho	104
6.12.		104
6.12.	2 Specialized Funding Agency IP Policies	106
6.13	Illinois	106
6.13.		
6.13.	•	108
6 14	Indiana	108
6.14.		
6.14.	· ·	
	_	
	Iowa	109
6.15. 6.15.	•	109
	Kansas	110
6.16.		110
6.16.	2 Specialized Funding Agency IP Policies	111
6.17	Kentucky	111
	1 University IP Policies	111
6.17.	2 Specialized Funding Agency IP Policies	112
6.18	Louisiana	112
	1 University IP Policies	
6.18.	2 Specialized Funding Agency IP Policies	114
6.19	Maine	114
	1 University IP Policies	
6.19.		116
6 20	Manuland	117
	1 University IP Policies	117
6.20.		
6.21 6.21.	Massachusetts 1 University IP Policies	
6.21.		
6.22	Michigan	120
	 University IP Policies Specialized Funding Agency IP Policies 	120
0.22.	2 Specialized Funding Agency IP Policies	122
6.23	Minnesota	
6.23.		124
6.23.	2 Specialized Funding Agency IP Policies	125
6.24	Mississippi	126
6.24.		
6.24.	2 Specialized Funding Agency IP Policies	129
6.25	Missouri	130
6.25.		
6.25.	2 Specialized Funding Agency IP Policies	131
6.26	Montana	132
6.26.		122
6.26.		
6 27	Nebraska	133
V.4/	i vedi ama	1.7.1

6.27.	1 Unive	ersity IP Policies	133
6.27.	2 Speci	alized Funding Agency IP Policies	134
6.28	Nevada		134
6.28.		ersity IP Policies	
6.28.		alized Funding Agency IP Policies	
<i>(</i> 20	-		
6.29	New Ham		
6.29. 6.29.		ersity IP Policies	
0.29.	z Speci	alized Funding Agency IP Policies	135
6.30	New Jerse		
6.30.	1 Unive	ersity IP Policies	136
6.30.	2 Speci	alized Funding Agency IP Policies	136
6.31	New Mexi	ico	136
6.31.		ersity IP Policies	
6.31.		alized Funding Agency IP Policies	
	-		
6.32	New York		137
6.33	North Car	rolina	138
6.33.		ersity IP Policies	
6.33.	2 Speci	alized Funding Agency IP Policies	138
6.34	North Dal	Izoto	138
6.34	North Dal	ersity IP Policies	
6.34.		alized Funding Agency IP Policies	
	-	unzed I dilding Figericy II Tolletes	
	Ohio		139
6.35.		ersity IP Policies	
6.35.	2 Speci	alized Funding Agency IP Policies	140
6.36	Oklahoma	a	141
6.36.		ersity IP Policies	
6.36.	2 Speci	alized Funding Agency IP Policies	142
6.37	Orogon		142
6.37.	Oregon	ersity IP Policies	1 42
6.37.		alized Funding Agency IP Policies	143
	_		
6.38	Pennsylva		143
6.38.		ersity IP Policies	143
6.38.	2 Speci	alized Funding Agency IP Policies	144
6.39	Rhode Isla	and	144
6.39.	1 Unive	ersity IP Policies	144
6.39.	2 Speci	alized Funding Agency IP Policies	145
6.40	South Car	rolina	1/15
6.40.		rolinaersity IP Policies	143 1/15
6.40.		alized Funding Agency IP Policies	
	-		
	South Dal		147
6.41.		ersity IP Policies	147
6.41.	2 Speci	alized Funding Agency IP Policies	147
6.42	Tennessee	e	148
6.42.	1 Unive	ersity IP Policies	148
6.42.	2 Speci	alized Funding Agency IP Policies	148
6.43	Texas		149
117. 7			

- 10 -	University IP Policies	15
6.43.2	Specialized Funding Agency IP Policies	13
6.44 II	tah	15
6.44.1		15
6.44.2	University IP PoliciesSpecialized Funding Agency IP Policies	
0.44.2	Specianized runding Agency if Folicies	13
6.45 Ve	ermont	15
6.45.1	University IP Policies	15
6.45.2	Specialized Funding Agency IP Policies	15
6.46 Vi	rginia	15
6.46.1		
6.46.2	Specialized Funding Agency IP Policies	
<i>(47</i> 33)		
6.47.1	ashington	15
6.47.1	University IP PoliciesSpecialized Funding Agency IP Policies	
0.47.2		
	est Virginia	15
6.48.1	University IP Policies	
6.48.2	Specialized Funding Agency IP Policies	16
6.49 W	isconsin	16
6.49.1	University IP Policies	16
6.49.2	Specialized Funding Agency IP Policies	
6.50 W	yoming	16
6.50.1		10 16
0.50.1		
6 50 2		
6.50.2	Specialized Funding Agency IP Policies	16
		16
New Yo	Specialized Funding Agency IP Policies	16
New Yo	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives	16 16.
New Yo Conclu	Specialized Funding Agency IP Policies	16. 16. 16. 16
7 New Yo B Conclu Appendices Appendix	Specialized Funding Agency IP Policies	16161616
New York Conclusion Appendices Appendix A.1	Specialized Funding Agency IP Policies	16161616161616.
New York Conclust Appendices Appendix A.1 A.2	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research	161616161616161616.
New You Rependices Appendix A.1 A.2 Appendix	Specialized Funding Agency IP Policies	16161616161616161616.
New You Rependices Appendix A.1 A.2 Appendix B.1 AU	Specialized Funding Agency IP Policies	161616161616161616161616.
New You Rependices Appendix A.1 A.2 Appendix B.1 AU	Specialized Funding Agency IP Policies	16161616161616161616.
New You Rependices Appendix A.1 A.2 Appendix B.1 AU B.2 AU	Specialized Funding Agency IP Policies	161616161616161617.
New Your Services Appendices Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix	Specialized Funding Agency IP Policies	161616161616161718.
New York Conclust Appendices Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Alas	Specialized Funding Agency IP Policies	161616161616171818
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala: C.3 Ariz	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona	16161616161617181818
Appendices Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Alas C.3 Ariz C.4 Ark	Specialized Funding Agency IP Policies	161616161616161718181819.
Appendices Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala: C.3 Ariz C.4 Ark C.5 Cali	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia	161616161616161718181919.
Appendices Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala C.3 Ariz C.4 Ark C.5 Cali C.6 Cole	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado	161616161616161617181818191919.
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala: C.3 Ariz C.4 Ark C.5 Cali C.6 Colo C.7 Con	Specialized Funding Agency IP Policies Ork State Intellectual Property Policy Alternatives A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado mecticut	161616161616161718181819191919.
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala C.3 Ariz C.4 Ark C.5 Cali C.6 Cole C.7 Con C.8 Deli	Specialized Funding Agency IP Policies Ork State Intellectual Property Policy Alternatives A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado unecticut aware	1616161616161616171818181919
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala C.3 Ariz C.4 Ark C.5 Cali C.6 Cole C.7 Con C.8 Dels C.9 Flor	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado mecticut aware rida	16161616161616161718181819192020.
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala C.3 Ariz C.4 Ark C.5 Cali C.6 Cole C.7 Con C.8 Deli C.9 Flor C.10 Ge	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado mecticut aware crida eorgia	161616161616161617181818191919202020
Appendix A.1 A.2 Appendix B.1 AU B.2 AU Appendix C.1 Alal C.2 Ala C.3 Ariz C.4 Ark C.5 Cali C.6 Cole C.7 Con C.8 Dela C.9 Flor C.10 Ge C.11 Ha	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas affornia orado anecticut aware crida corgia	161616161616161617181818191920
Appendix Al	Specialized Funding Agency IP Policies ork State Intellectual Property Policy Alternatives asion A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs Service Engineering Corporation v. United States Department of Agriculture Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research B—AUTM Data TM Survey by State TM Survey of Universities by States C—Detailed State IP Policies bama ska zona ansas ifornia orado mecticut aware crida eorgia	

C.15	Iowa	210
C.16	Kansas	211
C.17	Kentucky	212
C.18	Louisiana	213
	Maine	215
C.20	Maryland	217
	Massachusetts	219
	Michigan	221
	Minnesota	225
C.24	Mississippi	228
C.25	Missouri	231
C.26	Montana	234
	Nebraska	236
C.28	Nevada	239
C.29	New Hampshire	240
C.30	New Jersey	242
C.31	New Mexico	243
C.32	New York	245
	North Carolina	246
C.34	North Dakota	247
C.35	Ohio	249
	Oklahoma	251
C.37	Oregon	254
C.38	Pennsylvania	256
	Rhode Island	258
C.40	South Carolina	259
C.41	South Dakota	261
C.42	Tennessee	263
C.43	Texas	263
	Utah	269
	Vermont	271
	Washington	275
C.48	West Virginia	277
	Wisconsin	279
C.50	Wyoming	281

Executive Summary

Industry sponsored academic research is a fundamental component of Research and Development ("R&D") throughout the US and the state of New York. Academic research leads to scientific advancement and improves society's quality of life by generating innovations in areas such as healthcare, agriculture, consumer electronics, and by strengthening the economy through industry and job creation. The role of state government in creating an atmosphere where University R&D can flourish and where the state benefits from the investment is the very question this report discusses. Research has been compiled to provide a potential resource for policy makers when considering a comprehensive state wide intellectual property ("IP") policy.

The first section of this report discusses the current environment of University IP commercialization. A view of Federal IP policies and industry push-back on University R&D begins this section. Thereafter, information is provided concerning University technology transfer activities and factors from within and outside the University that affect economic development. Data is provided showing total University IP expenditures, invention disclosures, filed patent applications, issued patents, start-up formations, license income, and finally, licenses and options executed.

Next, this report summarizes the findings, guiding principles, objectives and recommendations from a recent California report written for policy makers considering a comprehensive state IP policy. A view of current New York agencies' IP policies follows, including SUNY, the Research Foundation, NYS College of Agriculture and Life Sciences at Cornell University, CUNY and the CUNY Research Foundation, NYSTAR, and NYSERDA. Finally, the report discusses current New York Assembly activity with regard to a comprehensive state IP policy.

The concluding sections of this report canvass the IP policies of all fifty states in the US, presenting their respective state policies, summaries of their University system IP policies, and other relevant specialized funding agencies. Differences and commonalities are discussed. A comprehensive conclusion reviewing all the aforementioned research with findings and recommendations is not completed, but will be added to the final report.

Introduction

Many factors can be taken into consideration when developing a comprehensive state intellectual property ("IP") policy for University research. This report canvasses information and issues relevant to consider when planning a comprehensive state IP policy. Section 1 identifies federal laws that directly impact state IP policies, including the Bayh-Dole Act and IRS Revenue Procedure 97-14.

Section two considers the IP commercialization environment. This section examines reasons why industry is willing or not willing to engage in University sponsored research, and a current industry trend of off-shoring research and development. A literature survey considers the effectiveness of technology transfer, and its economic impact. This section also data mines technology transfer activities in New York State using the Association of University Technology Manager's 2003, 2004, and 2005 reports. Finally, this section provides an introduction to open source, considering creative commons, science commons, and the IBM open source initiative.

Section three reviews a recent California report which was issued to policy makers as background for consideration of a comprehensive state IP policy. The findings of the report with guiding principles, and recommendations from the report are summarized.

Section four contains information concerning SUNY and the Research Foundation, NYS College of Agriculture and Life Sciences at Cornell University, and City University of New York (CUNY) and the Research Foundation. It also provides information concerning NYSTAR and NYSERDA, and technology transfer/sponsored administration offices and affiliated New York state agencies.

Section 5 provides an overview of state IP policies. This information was gathered from research conducted on each of the 50 states, analyzing their respective IP policies. Finally, Section 6 is a summary of the findings from each of the 50 states.

1 Federal Intellectual Property Policies

1.1 Bayh-Dole Act

The Bayh-Dole Act was enacted in 1980 to create a uniform patent policy among the government institutions that fund research. The Act allowed small businesses and non-profit organizations, such as universities, to elect to take title to inventions developed with federal funds. However, the Act imposes numerous conditions in exchange for the university's right to elect to take title in an invention. First, the Bayh-Dole Act provides that the federal government shall have a non-exclusive, non-transferable, irrevocable, paid-up license to practice the invention, or to have the invention practiced on behalf of the United States, anywhere in the world. Second, the federal agency that provided the research funding which lead to the invention has "march-in rights" to reclaim title to the invention if:

- (1) The action is necessary because the contractor or assignee has not taken effective steps to achieve practical application of the invention;
- (2) The action is necessary to alleviate health or safety needs that are not being met by the contractor or assignee;
- (3) The action is necessary to meet requirements for public use specified in federal regulations; or
- (4) The action is necessary because an exclusive licensee of the invention has breached its agreement to have the invention manufactured substantially in the United States.²

Third, the university must disclose each invention to the federal agency that funded the research within a reasonable time after the inventor discloses the invention to the university.³ If the university fails to disclose the invention to the federal funding agency within that period of time, the federal government can take title to the invention.⁴ Fourth,

¹ 35 U.S.C. §202(c)(4) (2004).

² 35 U.S.C. §203 (2004).

³ 35 U.S.C. §202(c)(1) (2004).

⁴ *Id*.

the university must agree to file a patent application on the invention within the time allowed under the patent laws.⁵ The federal government may take title to an invention if the university does not file a patent application within the allowed period of time.⁶ Fifth, the Bayh-Dole Act provides that the university shall give small business firms priority in licensing a federally-funded invention whenever it is feasible.⁷ Finally, the Bayh-Dole Act requires that the university share royalties with the inventor⁸ and use the royalties remaining after administrative expenses for support of scientific research and education.⁹

1.1.1 Private Causes of Action Under Bayh-Dole Act

In some instances, private parties can bring causes of action under federal statutes to enforce the provisions of the statutes in order to protect their individual interests. For example, in Head Start Family Education, Inc. v. Cooperative Education Services Agency, the plaintiff claimed that it had been wrongly denied a contract to provide Head Start services. The plaintiff asserted that this denial was a violation of the Head Start Act. The Seventh Circuit Court of Appeals found that the plaintiff could bring a cause of action under the Head Start Act to challenge the contract denial. In determining whether a private cause of action exists under a federal statute, courts generally consider four factors: (1) whether the plaintiff is part of a class that is intended to be benefited under the statute; (2) whether the legislative history shows that Congress intended to create a private right of action under the statute; (3) whether a private cause of action

⁵ 35 U.S.C. §202(c)(3) (2004).

⁶ *Id*.

⁷ 35 U.S.C. §202(c)(7)(D) (2004).

⁸ 35 U.S.C. §202(c)(7)(B) (2004).

⁹ 35 U.S.C. §202(c)(7)(C) (2004).

¹⁰ 46 F.3d 629 (7th Cir. 1995).

¹¹ Id.

¹² *Id*. at 63

would advance the purposes of the statute; and (4) whether the plaintiff's claim is traditionally a state law cause of action.¹³

Two cases have considered the question of whether private parties can bring causes of action under the Bayh-Dole Act. In the first case, Platzer v. Sloan-Kettering Institute for Cancer Research (hereafter Platzer), three research scientists employed by Sloan-Kettering claimed that they had a right under the Bayh-Dole Act to receive 50% of the royalties paid on their invention of a new means to stimulate the production of white blood cells. In support of their claim, the plaintiffs argued that § 202(c)(7)(B) of the Bayh-Dole Act requires that royalties received from licensing federally funded inventions be shared with the inventor(s) and that, although § 202(c)(7)(B) does not specify that a certain percentage of royalties to be shared with the inventor(s), the legislative history shows that Congress intended that the royalty share be reasonable and greater than 15%. The court applied three of the four factors set forth above to determine whether the plaintiffs could bring a private cause of action under the Bayh-Dole Act. First, the court found that the legislative history of the Bayh-Dole Act did not indicate that it was enacted for the benefit of research scientists. Rather, the court found that the Bayh-Dole Act was intended:

to promote the utilization and commercialization of inventions made with [federal] Government support, to encourage the participation of smaller firms in the [federal] Government research and development process, and to promote increased cooperation and collaboration between the nonprofit and commercial sectors.¹⁷

¹³ See Merrell Dow Pharmaceuticals, Inc. v. Thompson, 478 U.S. 804 (1986).

¹⁴ 787 F. Supp. 360,362, 365 (S.D.N.Y 1992) (hereafter Platzer).

¹⁵ *Id.* at 362.

¹⁶ *Id.* at 364.

¹⁷ *Id*.

Based on its reading of the legislative history, the court concluded that the intended beneficiaries of the Bayh-Dole Act were the research institutions and the government, not private individuals.¹⁸

Second, the court found that the legislative history of the Bayh-Dole Act was completely silent as to whether Congress intended to create a private cause of action under the Act.¹⁹ The court assumed that this Congressional silence indicated that Congress did not intend to create a private cause of action under the Bayh-Dole Act.²⁰

Finally, the court found that a private cause of action would not advance the purposes of the Bayh-Dole Act.²¹ The court repeated its finding that the Bayh-Dole Act was intended to foster commercial development of federally funded research and noted that one provision of the Bayh-Dole Act requires that royalties received from federally funded inventions be reinvested in future scientific research.²² The court found that Congress's goal of supporting future scientific research through the reinvestment of royalty revenues would be frustrated, not furthered, if private individuals could bring a cause of action demanding 50% of the royalties received.²³

The court concluded, therefore, that no private cause of action exists under § 202(c)(7)(B) of the Bayh-Dole Act.

In the second case that considered whether a private cause of action exists under the Bayh-Dole Act, Service Engineering Corporation v. United States Department of Agriculture (hereafter Service Engineering), the plaintiffs claimed that the USDA violated § 209(e) of the Bayh-Dole Act by failing to publish public notice of its intent to grant an exclusive license to a patent on an improved method of vaccinating poultry.²⁴ Section 209(e) of the Bayh-Dole Act provides that no exclusive or partially exclusive

¹⁸ *Id.* at 364-365.

¹⁹ Platzer supra note 4 at 365.

²⁰ *Id*.

²¹ *Id*.

²² *Id*.

²³ Platzer *supra* note 4 at 365.

²⁴ 1999 U.S. Dist. LEXIS 21952 (hereafter Service Engineering).

license may be granted by an agency unless public notice of the intention to grant the license has been published at least 15 days prior to the date the license is granted, and the agency has considered all comments received in response to the public notice during the comment period.²⁵

As a result of the USDA's failure to publish a public notice of intent to grant an exclusive license, the plaintiffs alleged that they suffered a "competitive injury" due to their inability to compete effectively with the exclusive licensee of the patent, that they had been injured by two patent infringement suits brought by the exclusive licensee against the plaintiffs, and that their interests were within the zone of interests protected by the Bayh-Dole Act, which the plaintiffs contended was to protect economic competitors from anticompetitive effects of government licensing policies.²⁶

The court in Service Engineering set forth a somewhat different test to determine whether the plaintiffs had standing to bring a private cause of action under the Bayh-Dole Act. To establish standing, the Service Engineering court held that the plaintiff must show: (1) that the plaintiff personally has suffered actual or threatened injury that is concrete and particular; (2) that the injury can be fairly traced to the challenged action; and (3) that the injury is likely to be redressed by a favorable decision from the court.²⁷

In applying this test, the court first found that the plaintiff's interests that were affected by the USDA's failure to publish a public notice of intent to grant an exclusive license were not among those interests that Congress sought to protect under the Bayh-Dole Act.²⁸ The court stated that the goal of the Bayh-Dole Act is to "secure the public good of commercial exploitation of patents on inventions which result from [federal] government-funded research."²⁹ Although the court acknowledged that § 211 of the Bayh-Dole Act pertained to antitrust laws and, therefore, market competition in general, the court held that nothing in the Bayh-Dole Act indicated that Congress intended to

²⁵ 35 U.S.C. § 209(e).

²⁶ *Id.* at 9.

²⁷ *Id.* at 10.

²⁸ *Id.* at 14.

²⁹ Service Engineering *supra* note 14 at 15.

protect the specific economic interests of firms that competed with government licensees.³⁰

The court also found that the plaintiffs presented no persuasive evidence that the Bayh-Dole Act requirement of agency public notice prior to granting an exclusive license was intended to promote the interests of competitors of agency licensee's.³¹ Rather, the court held that the purpose of the public notice requirement in the Bayh-Dole Act was to improve the licensor agency's ability to determine whether granting an exclusive license is the best means to achieve commercialization of the invention and make it available to the public.³²

The Platzer and Service Engineering cases reached similar results using similar reasoning. However, both of these cases were federal district court cases and, therefore, do not establish binding precedent within their respective federal circuits, or in other federal circuits. Nonetheless, the combination of the two cases does provide strong authority for the proposition that private causes of action will not be permitted under the Bayh-Dole Act.

Detailed briefs of the Platzer and Service Engineering cases are included in Appendix A of this report.

1.2 IRS Revenue Procedure 97-14

If a university enters into a sponsored research agreement with a company with the university being either a state entity (e.g. a state university) or a tax exempt non-profit organization, as defined by Internal Revenue Code §501(c)(3), and the university plans to conduct the research in facilities built with tax-exempt bond financing, the university must abide by Internal Revenue Service Revenue Procedure 97-14 ("97-14).³³ If a university fails to abide by 97-14, the tax-exempt status of the bonds used to finance the research facility can be revoked.

³⁰ *Id.* at 16.

³¹ *Id*.

³² *Id.* at 17.

³³ Rev. Proc. 97-14, 1997-1 C.B. 634. *See* Frederic L. Ballard, *Tax Exempt Bonds and Sponsored Research*, 36 J. Health L. 43 (2003).

97-14 imposes several requirements that affect university-industry sponsored research projects. First, the sponsored research must qualify as "basic research." ³⁴ Under the definition of "basic research" in the regulation, the research cannot have a specific commercial objective.³⁵ Second, the university must have title to all intellectual property that results from the sponsored research agreement. Furthermore, the university is not obligated to offer the corporate sponsor a license to that intellectual property.³⁶ At the time the university enters into a sponsored research agreement, the university may only grant the corporate sponsor the first right to negotiate an exclusive license to the intellectual property. The university and sponsor cannot enter into an actual licensing agreement until the resulting intellectual property is available for use and can be competitively valued.³⁷ Although the university is not required to offer a license to the sponsor or a third party, in the event that the university does offer a license to the sponsor, the sponsor must pay a fair market value price.³⁸ In addition, as a tax-exempt entity, the university must serve a public, rather than a private, interest in conducting the research. In order to serve a public interest, the university must make the research results available to the public in an adequate and timely manner. However, the university may delay disclosure of the research results to the public for a period of time sufficient to obtain intellectual property protection. A delay in disclosure beyond the period of time necessary to obtain intellectual property protection is deemed to make the research for a private interest purpose within the meaning of 501(c)(3). Disclosure in the form of a patent application will not be a sufficient public disclosure, if the patent application disclosure does not provide substantially all of the information that would be beneficial to the public.

³⁴ Rev. Proc. 97-14 §3.01.

³⁵ *Id*.

³⁶ Rev. Proc. 97-14 §5.02.

³⁷ *Id*.

³⁸ *Id*.

2 Intellectual Property Commercialization Environment

2.1 Industry Push-Back on University Research and Development

In order to understand industry participation in sponsored research, it is necessary to determine what motivates companies to either participate in the sponsored research process or to avoid it all together.

2.1.1 Reasons for Participating in Sponsored Research

Companies choose to participate in sponsored research for various reasons. First, companies can gain expertise through access to University faculty. Sponsored research provides companies access to technical expertise and know-how easily and inexpensively.³⁹ This specialized knowledge will hopefully lead to better information and higher profits, and provides an inexpensive means of gaining needed specialized knowledge outside the companies' core expertise.⁴⁰

Second, companies choose to participate in sponsored research to obtain access to grant money. Companies often experience internal financial constraints which limit their ability to do all necessary research within the company, and University sponsored research becomes an attractive option. Third, companies can obtain a fresh perspective from outside persons with special expertise who may provide new insight on technical innovations that were previously overlooked by the company researchers. A final reason that companies choose to participate in sponsored research is to take advantage of the close location of university research facilities. When a company is located in the same general region as the research university, meetings, presentations, dispute resolution, and other day-to-day business activities are more readily

³⁹ University – Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research, at 20.

⁴⁰ *Id*.

⁴¹ *Id*. at 21.

⁴² *Id*.

⁴³ *Id.* at 22.

accomplished.⁴⁴ Close proximity to one another also tends to promote strong interpersonal relationships and collaboration between university researchers and company employees.⁴⁵

2.1.2 Reasons for Not Participating in Sponsored Research

While companies choose University sponsored research for some of the reasons mentioned above, companies will conversely choose not to engage in University sponsored research for a number of reasons also. Companies will not engage in sponsored research for three general reasons: sponsored research is not needed; sponsored research entails protracted debate over intellectual property rights; and university bureaucracy creates high transaction costs for sponsored research project.⁴⁶

First, some companies simply do not need sponsored research because their companies may be focused on a specific part of an industry and can provide all the necessary research and development using in-house methods, or their products and customers do not require a large amount of research investment for business success.⁴⁷ Some companies have such specific products or need such specific research that university sponsored research would not add value to its business operations.⁴⁸

Second, some companies avoid University sponsored research because of the protracted debate over intellectual property rights that sometimes occur. In many cases, universities insist on having ownership rights to the work product when the research project was fully funded by the company. Companies, of course, want to obtain as much of the intellectual property rights in the work product as possible. These

⁴⁴ *Id*.

⁴⁵ *Id*.

⁴⁶ *Id*.

⁴⁷ *Id.* at 23.

⁴⁸ *Id*.

⁴⁹ *Id*.

diametrically opposing positions often lead to protracted discussions over intellectual property rights that cause the company to lose time, money and market opportunities.⁵⁰

Finally, companies will avoid sponsored research because of University bureaucracy and high transaction costs. The problem with intellectual property rights is a subset of a larger problem that some respondents labeled as "university bureaucracy," referring to the hierarchical structure of university administrative offices and academic departments as well as the numerous regulations that must be adhered to in order to comply with university policies.⁵¹ Some companies claim that this bureaucracy can effectively kill a project, or make the whole sponsored research process unbearable, leading them to turn down the invitation to participate.⁵² University bureaucracy especially affects pharmaceutical and medical device companies because their time-to-market is critical to business success. Universities also do not operate on the same timeline as companies because university employees do not have the same incentives that company employees have to work long hours and produce results rapidly, and so their schedules differ.⁵³

Companies also suggest that in many instances universities vastly overestimate the commercial value of an invention and their fair share of that value.⁵⁴ From the perspective of company sponsors, universities typically try to extract too much money from the licensee before the product or process is even introduced in the market, let alone profitable. Sponsor companies also claim that, in many instances, universities are naïve regarding the commercial risk associated with a new technology and the amount of additional investment a company will have to make bring a new technology to market.⁵⁵ The typical royalty rate range companies prefer when entering into sponsored research negotiations with universities varies widely, depending on the technical field, the

⁵⁰ Id.

⁵¹ *Id*.

⁵² *Id*.

⁵³ *Id*.

⁵⁴ *Id.* at 28.

⁵⁵ *Id.* at 35.

business opportunities, the specifics of the application, and the additional money, time, and research necessary to bring a product to market. ⁵⁶

2.2 Off Shore Research and Development

Many large companies will begin to do more sponsored research with foreign universities over the next decade. Foreign universities have learned to compete with American universities by allowing companies to obtain a large share of intellectual property rights resulting from a sponsored research project.⁵⁷ Because of the stringent discovery ownership claims of U.S. universities, growing numbers of U.S. companies are seeking sponsored research opportunities outside of the U.S., especially in China and India where it is easier to obtain IP ownership rights.⁵⁸

Companies consider different factors when deciding whether to relocate sponsored research outside of the U.S. "Here or There? A Survey of Factors in Multinational R&D Location" presented results from a survey of over 200 multinational companies across 15 industries considering the factors that influence the company's decision on where to conduct research and development. When respondents were asked which regions will see research and development employment growth, nearly 70% of the survey respondents indicated that China would be a target for expansion, and approximately 40% of respondents anticipated that India would also grow. 60

ia at 3.

⁵⁶ *Id.* For example, a royalty rate of 0.05% of net sales may be reasonable for low margin, low sales products where the university's contribution is limited; and a royalty rate of 3% of net sales might be reasonable for high margin, high sales products where the university's contribution is pivotal and enabling. Generally, a 0.5% - 5% royalty rate is standard for incremental improvement technology, and 5% - 10% royalty rate is standard for fundamental enabling of technology.

⁵⁷ University Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research, at 24.

⁵⁸ *Id* at 31.

⁵⁹ Thursby, Jerry and Thursby, Marie. *Here or There? A Survey of Factors in Multinational R&D Location—Report to the Government-University-Industry Research Roundtable*. Available at: http://www.nap.edu/catalog/11675.html, (last visited Feb. 24, 2007). The study surveyed a wide range of companies from chemicals to textile products.

⁶⁰ *Id.* at 11. Respondents were asked to select which "regions will have growth in technical employment, in which regions do you anticipate the largest growth?" The Respondents were also asked "If any regions will have a reduction in technical employment, in which regions do you anticipate the largest reduction?" The Respondents were given five geographical regions to choose from in answering the above question: United States, Western Europe, Former Soviet bloc countries, China, India, or Other.

2.3 University Research and Local Economic Development

Empirical literature on the impact of university research on local economic development can inform the deliberations of New York State policy makers on possible intellectual property policies. The relationship between university research and local economic development is affected by factors *within* the university, such as the amount of research funding, the quality of research faculty and the effectiveness of the technology transfer office, and by factors *outside* the university, such as the size of the local metropolitan area and the presence of certain types of industries. Part one of this section will briefly present background information on university technology transfer activities. Part two of this section will review research findings on factors *within* the university that affect local economic development. Part three of this section will review research findings on factors *outside* the university that affect local economic development.

2.3.1 Background Information on University Technology Transfer Activities

There are three primary means by which universities seek to commercialize their research discoveries: (i) licensing agreements between universities and established companies; (ii) university-industry sponsored research projects; and (iii) university-based start-up companies. University technology transfer activities have increased dramatically since the enactment of the Bayh-Dole Act in 1980. In 2004, the Association of University Technology Managers (AUTM) reported an eightfold increase in the number of university technology transfer offices, a six fold increase in the number of university patents filed and a fivefold increase in university licensing revenue.

However, the success of commercialization activities varies widely among academic fields and technologies. For example, medicine accounts for 55 % of university licensing revenue, and engineering and physics together account for 24 percent

14

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⁶¹ Phillip H. Phan and Donald Siegel, *The Effectiveness of University Technology Transfer, in* FOUNDATIONS AND TRENDS IN ENTREPRENEURSHIP, Vol. 2, No. 2, 78 (2006) [hereinafter Phan and Siegel]. Phan and Siegel review the literature on technology transfer effectiveness. In order to direct the reader to the original literature source, I will hereafter cite to the original literature source, noting that the source is cited in Phan and Siegel.

⁶² AUTM Licensing Survey, Fiscal Year 2003, cited in Phan and Siegel at 80.

of licensing revenue.⁶³ Analyses of the commercial value of university patents liken the chances of success to winning a lottery.⁶⁴ Examples of highly successful university patents are the Cohen-Boyer gene splicing patent (jointly owned by the University of California and Stanford University), the Gatorade patent (owned by the University of Florida), the fax technology patents (owned by Iowa State University) and the Taxol patent (owned by Florida State University).⁶⁵ A rule of thumb among technology transfer officers is that for every 100 inventions disclosed by faculty, only 10 results in a patent and only 1 results in a commercially successful product or process.⁶⁶

The success of commercialization activities also varies widely among universities. For example in 2000, the top 15 universities accounted for 65 percent of total university licensing income. University licensing income also accounts for a very small percentage of total university revenue. For example, patent income represented less than 3 percent of total university revenue for 10 of the top 15 universities in 2000. Table X below lists the patent income and percentage of total revenue for the top 15 universities in 2000.

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⁶³ G. Graff, A. Heiman, and D. Zilberman, *University Research and Offices of Technology Transfer*, 45 CALIFORNIA MANAGEMENT REVIEW 88-115 (2002) as cited in K. Hill, *University Research and Local Economic Development*, Arizona State University Productivity and Prosperity Project at 18 (2006) [hereinafter Hill]. Hill reviews the literature on university research and economic development. I will follow the same convention in citing to original literature sources in Hill as in Phan and Siegel.

⁶⁴ Hill *supra* note 63 at 18.

⁶⁵ *Id.* A large portion of the revenue from Gatorade comes from licensing the trademarked name "Gatorade" which the University of Florida also owns.

⁶⁶ M. Feldman et. al., *Equity and the Technology Transfer Strategies of American Research Universities*, 48 MANAGEMENT SCIENCE 105-121 (2002) as cited in Hill *supra* note 63 at 18.

⁶⁷ Graff et al. *supra* note 63 at 110.

⁶⁸ AUTM Licensing Survey, Fiscal Year 2000, as reported in Graff et. al. *supra* note 63 at 110.

TABLE X: PATENT INCOME IN 2000: TOP 15 UNIVERSITIES⁶⁹

	Patent Income	Percentage of
	(Millions of \$)	Total Revenue
University of California	\$261.5	3.2%
Columbia University	138.6	7.2
Dartmouth College	68.4	17.2
Florida State University	67.5	11.3
Stanford University	34.6	2.5
University of Washington	30.2	1.4
Massachusetts Institute of Technology	30.2	2.8
University of Pennsylvania	26.5	0.8
University of Florida	26.3	2.0
Georgetown University	26.0	5.3
Michigan State University	25.7	2.0
California Institute of Technology	23.7	1.6
University of Wisconsin	22.8	1.2
University of Minnesota	22.7	1.3
State University of New York	16.5	0.8
Total of All Universities	1,263.0	
Average per University	6.7	

Startup companies and small firms are an important means by which university research contributes to local economic development. Startup companies and small firms account for two-thirds of all university license agreements. More importantly, a 1999 AUTM survey found that four-fifths of university-licensed startup companies were located in the same state as the licensing university.

⁶⁹ *Id*.

⁷⁰ G. Graff et. al., *supra* note 3 as cited in Hill *supra* note 63 at 19.

⁷¹ D. Di Gregorio & S. Shane, *Why Do Some Universities Generate More Startups Than Others?*, 32 RESEARCH POLICY 209-227 (2003) as cited in Hill *supra* note 63 at 19.

2.3.2 Factors Within the University Affecting Local Economic Development

Many empirical studies have been completed on the factors that affect the success of university technology transfer efforts. A few studies have looked at factors that negatively affect university technology transfer. For example, one study found that informational and cultural barriers between universities and firms lessen the value of university technology to potential commercial partners, unless these barriers are explicitly addressed during the technology transfer process. 72 The same study also found that the high rate of turnover among university licensing officers impeded the development of long-term relationships between universities and firms, and that insufficient business and marketing experience in technology transfer offices limited the opportunities for commercialization of university technologies.⁷³ Another study found that university technology transfer offices are typically focused on short-term cash maximization, and are "extremely risk-averse with respect to financial and legal risks." 74 This study suggests that this combination of characteristics is antithetical to the most attractive opportunity to commercialize technology, which is licensing early stage technology to a new venture with a university equity investment. ⁷⁵ Finally, studies have found that inadequate incentive structures, such as failure to credit inventions toward faculty promotion and tenure, and failure to reward technology transfer staff for successful commercialization efforts, are impediments to effective technology transfer.⁷⁶

A number of studies have looked at factors that positively affect university technology transfers. One study found that the faster technology transfer offices can

⁷² D. Siegel et. al. Assessing the Impact of Organizational Practices on the Productivity of University Technology Transfer Offices: An Exploratory Study, 32 RESEARCH POLICY 27-48 (2003) as cited in Phan and Siegel supra note 61 at 93.

⁷³ *Id.* as cited in Phan and Siegel *supra* note 61at 97.

⁷⁴ G. Markman et. al., *Entrepreneurship and University-Based Technology Transfer*, 20 JOURNAL OF BUSINESS VENTURING 241-263 (2005) as cited in Phan and Siegel *supra* note 61 at 96.

⁷⁵ *Id*.

⁷⁶ D. Siegel et. al., *Toward a Model of the Effective Transfer of Scientific Knowledge for Academicians to Practitioners: Qualitative Evidence from the Commercialization of University Technologies*, 21 JOURNAL OF ENGINEERING AND TECHNOLOGY MANAGEMENT 115-142 (2004) as cited in Phan and Siegel *supra* note 61 at 106.

commercialize their technologies, the greater the return to universities and the higher the rate of start-up formations.⁷⁷ The key determinants of speed identified in the study were the technology transfer office's resources, its competency in identifying potential licensees, and the active participation of the faculty-inventor in the licensing process.⁷⁸ Another study found that two critical factors influence the number of university spin-off companies: the research environment of the university and the characteristics of the research park where the spin-off company locates.⁷⁹ This study suggests that the more research intensive a university is, the greater the likelihood that its faculty will be innovative; and the more innovative the faculty, the higher the probability that technologies will be developed to launch spin-off companies.⁸⁰

The higher the percentage of royalty payments that a university pays to its faculty inventors has also been associated with a higher level of technology transfer effectiveness. However, there are conflicting findings on whether the percentage of royalty payments shared with faculty are positively or negatively associated with the formation of startup companies. One study found a positive correlation between startup formations and favorable faculty royalty rate distribution formulas. However, another study found that favorable faculty royalty rate distributions reduced startup formations. This study attributed the negative association between favorable faculty royalty rate

⁷⁷ G. Markman et. al., *Innovation Speed: Transferring University Technology to Market*, 34 RESEARCH POLICY 1058-1075 (2005) as cited in Phan and Siegel *supra* note 61 at 96.

⁷⁸ *Id*.

⁷⁹ A. Link & J. Scott, *Opening the Ivory Tower's Door: An Analysis of the Determinants of the Formation of U.S. University Spin-Off Companies*, 34 RESEARCH POLICY 1106-1112 (2005) as cited in Phan and Siegel *supra* note 61 at 105.

⁸⁰ *Id*.

⁸¹ D. Siegel et. al. *supra* note 10 cited in Phan and Siegel *supra* note 61 at 98.

⁸² A. Lockett & M. Wright, Resources, Capabilities, Risk Capital and the Creation of University Spin-Out Companies, Technology Transfer and Universities' Spin-Out Strategies, 34 RESEARCH POLICY 1043-1057 (2005) as cited in Phan and Siegel supra note 61 at 96.

⁸³ D. Di Gregorio & S. Shane, *Why Do Some Universities Generate More Start-ups than Others?*, 32 RESEARCH POLICY 209-227 (2003) as cited in Phan and Siegel *supra* note 1 at 99. This study found that an increase of 10 percentage points in the faculty's share or royalties reduces the number of startup formations by 20 percent. Di Gregorio and S. Shane as cited in Hill *supra* note 63 at 30.

distributions and startup formations to the fact faculty receiving favorable royalty distributions generally prefer licensing of their inventions rather than the more risky alternative of launching new firms to commercialize their invention.⁸⁴

The study referenced above at footnote 20 also found a positive correlation between startup formations and university expenditures on intellectual property protection, and the business development acumen of the technology transfer office staff. These findings suggest that universities should focus on recruitment, training, and development of technology transfer officers with extensive commercial skills and experience if universities seek to spinout multiple startup companies. The study referenced above in footnote 21 found a strong positive correlation between startup activity and whether the university is allowed to make an equity investment in startup companies. Universities that are allowed to make equity investments in startup companies have a 1.7 times higher startup formation rate than universities that are not allowed to make equity investments in startup companies.

Additional factors that affect local economic development are the quality of university research and graduate programs, the area of research in which the university specializes, and the university patent policy.

The quality of the university research and the quality of the university graduate programs affect local economic development in multiple ways. Universities that produce breakthrough discoveries in science and engineering attract high-technology companies that must locate near the universities in order to facilitate knowledge transfers. ⁸⁹

Knowledge regarding cutting-edge discoveries is usually possessed by a few "star" academic researchers who themselves have personal "drawing power." ⁹⁰ The quality of

⁸⁴ *Id*.

⁸⁵ A. Lockett & M. Wright *supra* note 22 as cited in Phan and Siegel *supra* note 61 at 96.

⁸⁶ *Id*.

⁸⁷ D. Di Gregorio & S. Shane *supra* note 23 as cited in Hill *supra* note 63 at 30.

⁸⁸ *Id*.

⁸⁹ See text accompanying notes 122-124.

⁹⁰ D. Audretsch & P. Stephan *supra* note 39 as cited in Hill *supra* note 63 at 24.

university graduate programs determines the availability of skilled science and engineering workers, which is a very important factor in siting industry R&D facilities. One study found that students with advanced degrees in science and engineering tend to locate in areas close to the university from which they graduated. This finding is supported by census data which shows that university graduate programs are positively correlated with highly educated workers in an area's adult resident population. 93

Academic research that directly influences industry innovation will have the greatest impact on local economic development. A study done by Yale University reached two general conclusions regarding which industries depend most heavily on university science and which academic fields are most important to industrial research. First, new industries rely more on university research than mature industries. Second, research in applied academic fields is more relevant to industrial innovation than research in basic science fields. The Yale study found that the industries that were most reliant on university research were pharmaceuticals, semiconductors, medical instruments and petroleum refining. The industries that were least reliant on university research were motor vehicle parts, motors and generators, and industrial chemicals. The Yale study also found that the academic fields most relevant to industry technical innovation were computer science, materials science, and mechanical, electrical and chemical

20

⁹¹ E. Malecki, *supra* note 43 as cited in Hill *supra* note 63 at 24.

⁹² K. Hill et. al., *The Value of Higher Education: Individual and Societal Benefits*, Center for Competitiveness and Prosperity Research, Arizona State University, October 2005, as cited in Hill *supra* note 63 at 13.

⁹³ Center for Competitiveness and Prosperity Research, Arizona State University, using data from the U.S. Bureau of the Census and the National Center for Education Statistics as cited in Hill *supra* note 63 at 14.

⁹⁴ Hill *supra* note 63 at 25.

⁹⁵ 1983 Yale Survey reported on in R. Nelson, *Institutions Supporting Technical Advance in Industry*, 76 AMERICAN ECONOMIC REVIEW 186-189 (1986) referenced in Hill *supra* note 63 at 9;

⁹⁶ *Id.* referenced in Hill *supra* note 63 at 25.

⁹⁷ Id.

engineering. 98 Two basic science fields, biology and chemistry, were also found to have a high degree of relevance to industry innovation. 99

Since the passage of the Bayh-Dole Act, universities have invested even greater resources in technology transfer activities. However, most universities have realized minimal financial returns from their technology transfer investments. One possible explanation for the disappointing return on university investments in technology transfer activities is that faculty are generally unwilling to take time away from research to develop inventions into commercially viable products and processes. Another possible explanation is that the technologies being licensed by universities are very early-stage technologies which licensees perceive to be highly risky and, therefore, not worth large royalty payments. For example, one study found that only 12 percent of university-licensed inventions were ready for commercial adoption at the time of the license agreement, and that over 75 percent of licensed inventions were no more than proof of concept inventions.

A number of studies have found that active, on-going involvement of faculty inventors in the technology transfer process is critical to commercial success of university inventions.¹⁰⁴ One study found that fixed-fee licensing agreements do not provide faculty with sufficient incentives to be actively involved in the commercialization of

⁹⁸ *Id.* at 26.

⁹⁹ *Id*.

¹⁰⁰ Hill *supra* note 63 at 28.

¹⁰¹ M. Feldman et. al., *Equity and the Technology Transfer Strategies of American Research Universities*, 48 MANAGEMENT SCIENCE 105-121 (2002) as cited in Hill *supra* note 63 at 29.

¹⁰² Hill *supra* note 63 at 29.

¹⁰³ R. Jensen & M. Thursby, *Proofs and Prototypes for Sale: The Licensing of University Inventions*, 91 AMERICAN ECONOMIC REVIEW 240-259 (2001) as cited in Hill *supra* note 63 at 29.

¹⁰⁴ See L. Zucker et. al., Commercializing Knowledge: University Science, Knowledge Capture, and Firm Performance in Biotechnology, 48 MANAGEMENT SCIENCE 138-153 (2002) as cited in Hill supra note 63 at 29.

inventions and that equity arrangements that link the faculty inventor's return to the performance of the licensee firm provide much greater incentives. ¹⁰⁵

Finally, university policy on equity investment in startup companies is very important. It was noted earlier that two-thirds of all university licenses are with startup and small companies, and that four-fifths of all university-licensed startup companies are located in the same state as the licensing university. ¹⁰⁶ It was also noted earlier that universities that are permitted to make equity investments in startup companies have 1.7 times as many startup company formations as universities that are not permitted to make equity investments in startup companies. ¹⁰⁷ A 2000 survey found that 70 percent of the university respondents had entered into at least one equity agreement. ¹⁰⁸

University technology transfer officers give three general reasons for the large increase in equity investments in startup companies. First, equity investments allow the university to share in the growth of startup companies even if the licensed invention is not successful. Second, equity investments closely align the interests of the startup company and the university. Third, startup companies often view university equity investments as an endorsement of the technology by the university which makes it easier to obtain venture capital. Because of the benefits of university equity investments in startup companies, universities that are not permitted to make equity investments in startup companies are disadvantaged in the technology transfer process and have less local economic impact.

¹¹⁰ *Id*.

¹¹¹ *Id*.

¹⁰⁵ R. Jensen & M. Thursby *supra* note 43 as cited in Hill *supra* note 63 at 29.

¹⁰⁶ See supra text accompanying notes 70 and 71.

¹⁰⁷ See supra text accompanying note 88.

¹⁰⁸ M. Feldman et. al. *supra* note 101 as cited in Hill *supra* note 63 at 30.

¹⁰⁹ *Id*.

¹¹² It should be noted, however, the university equity investments in startup companies, especially startup companies that have faculty involvement as technical advisors of company managers pose numerous conflict of interest issues. It is imperative that universities adopt a clear and comprehensive conflict of interest policy before entering into equity agreements.

2.3.3 Factors Outside the University Affecting Economic Development

Overall, the empirical literature conclusively establishes that university research programs have positive local economic impacts. However, the extent to which university research positively impacts local economic development depends upon a number of variables. Two of the most important variables are the presence of industries that depend heavily on new scientific findings and the location of universities in large metropolitan areas. 114

Studies of the long-term effects of university research on industrial innovation suggest that university research does not directly yield new commercial products as much as it increases the productivity of industrial R&D, the primary source of inventive activity. If these findings are correct, it would appear that the most important long-term contribution that universities make to technical advancement in industry is the training of science and engineering workers. Industry innovations that can be directly traced to advances in university research demonstrate that it takes a very long time for scientific advances to be transformed into industrial innovations, and that this transformation often crosses multiple disciplinary and industry boundaries.

Studies of the short-term effects of university research on industrial innovation also suggest that it is unusual for university research findings to be directly incorporated into new industry products and process. However, university research does directly contribute to new industry innovation in a some instances. One study found that 11 percent of new products and 9 percent of new processes would not have been developed

¹¹³ Hill *supra* note 63 at 2.

¹¹⁴ *Id*.

¹¹⁵ See R. Nelson, Institutions Supporting Technical Advance in Industry, 76 AMERICAN ECONOMIC REVIEW 186-189 (1986) as cited in Hill supra note 63 at 9. See also N. Rosenberg & R. Nelson, American Universities and Technical Advance in Industry, 23 RESEARCH POLICY 323-348 (1994) and A. Klevorick et. al., On the Sources and Significance of Industry Differences in Technological Opportunities, 24 RESEARCH POLICY 185-205 (1995) both as cited in Hill supra note 63 at 9.

¹¹⁶ Hill *supra* note 63 at 9.

¹¹⁷ *Id*.

¹¹⁸ Id.

by industry without the aid of recent academic research.¹¹⁹ This study estimated that the social return on investment in university research was 28 percent.¹²⁰ The fact that university research has some positive effect on industry innovation is further supported by a 1998 industry survey in which two-thirds of the respondents said that academic research was at least "moderately important" to their R&D activities.¹²¹

As noted above, one of the most important variables affecting the extent to which university research impacts local economic development is the local presence of industries that depend heavily on new scientific discoveries. Information scholars distinguish between codified knowledge (knowledge that can be written down and transferred easily through formulas or text) and tacit knowledge (knowledge that is highly complex and can only be transferred through face-to-face communication). The new knowledge yielded from breakthrough discoveries in science and engineering is almost entirely tacit knowledge. To obtain this tacit knowledge, companies that are dependent upon scientific and engineering breakthroughs must locate near the universities and research scientists that possess the tacit knowledge. However, at least in some industries, the relationship between academic researchers and high-technology firms is not always local and there is considerable variation in the extent to which high-technology firms rely on local scientific talent. For example, one study found that approximately one-half of academic scientists who work with Boston-area biotech firms have faculty appointments with Boston-area universities, while biotech firms in San

¹¹⁹ E. Mansfield, *Academic Research and Industrial Innovation*, 20 RESEARCH POLICY 1-12 (1991) as cited in Hill *supra* note 63 at 10.

¹²⁰ *Id*.

¹²¹ W. Cohen et. al, *Industry and the Academy: Uneasy Partners in the Cause of Technological Advance* in CHALLENGES TO RESEARCH UNIVERSITIES, R. Noll ed. (1998) as cited in Hill *supra* note 63 10.

¹²² Hill *supra* note 63 at 11.

¹²³ M. Darby & L. Sucker, *Growing by Leaps and Inches: Creative Destruction, Real Cost Reduction and Inching Up*, 41 ECONOMIC INQUIRY 1-19 (2003) as cited in Hill at 12.

¹²⁴ *Id*.

¹²⁵ D. Audretsch & P. Stephan, *Company-Scientist Locational Links: The Case of Biotechnology*, 86 AMERICAN ECONOMIC REVIEW 641-652 (1996) as cited in Hall *supra* note 63 at 17.

Diego and New York hire only one-quarter of their academic scientists from local universities. 126

The second factor, noted above; that greatly affects the impact of university research on local economic development is the location of the university in a large metropolitan area. Innovative activity tends to concentrate in large cities. Studies speculate that large urban areas offer amenities that scientists, engineers, managers and entrepreneurs highly value. One study suggests that city size is a more important siting variable for high-technology companies than low taxes or low wages. Patent data also shows a strong positive correlation between city size and innovation. Cities with 1-4 million people produce twice as many patents per person as cities with a population between 50,000 and 250,000. New product innovations are also much higher in large metropolitan areas. A 1982 SBA study found that large metropolitan areas accounted for 96 percent of product innovations, but only 30 percent of population.

There are mixed findings on the importance of local sources of venture capital to the commercialization of university technologies and local economic development. One study found that the availability of venture capital in the area in which the university is located had an insignificant impact on the rate of startup company formations.¹³² However, another study found that the availability of local venture capital for university

¹²⁶ *Id*.

¹²⁷ Hill *supra* note 63 at 28.

¹²⁸ E. Malecki & S. Bradbury, *R&D Facilities and Professional Labour: Labour Force Dynamics in High Technology*, 26 REGIONAL STUDIES 123-135 (1992) as cited in Hill *supra* note 63 at 28.

¹²⁹ E. Malecki, *The R&D Location Decision of the Firm and 'Creative Regions' - A Survey*, 6 TECHNOVATION 205-222 (1987) as cited in Hill *supra* note 63 at 28.

¹³⁰ M. Orlando & M. Verba, *Do Only Big Cities Innovate? Technological Maturity and the Location of Innovation*, FEDERAL RESERVE BANK OF KANSAS ECONOMIC REVIEW, 31-57 (2005) as cited in Hill *supra* note 63 at 28.

¹³¹ M. Feldman & D. Audretsch, *Innovation in Cities: Science-Based Diversity, Specialization, and Localized Competition*, 43 EUROPENA ECONOMIC REVIEW 409-429 (1999) as cited in Hill *supra* note 63 at 28.

¹³² Di Gregorio & S. Shane *supra* note 23 as cited in Phan and Siegel *supra* note 61 at 93.

Although it is generally assumed that venture capital investors prefer local investments so that they can more carefully monitor startup companies, the findings on this point are also mixed. One study has found that the availability of venture capital had no significant effect on the location of new biotechnology firms, but rather the drawing power of "star" researchers and the presence of highly rated science departments influenced siting decisions much more. Another study also found that the availability of local venture capital had no effect on the rate of startup formations when other factors, such as the prestige of the university, are taken into account.

2.4 AUTM Data and Analysis

This section data mines technology transfer activities in New York State using the Association of University Technology Manager's 2003, 2004, and 2005 Annual Surveys (See Appendix B). The Association of University Technology Managers (AUTM) has accumulated comprehensive quantitative information on technology transfer activities in the United States. Beginning in 1991, AUTM has surveyed over 300 universities and collected sixteen years of university based technology transfer information on total research expenditures, invention disclosures, number of patent applications filed, start-up companies formed, number of issued patents, license income, and the number of options and licenses executed. This report uses this data to measure twelve States' relative technology transfer effectiveness by using a ratio of total research expenditure to the above mentioned technology transfer activities and computing an index that highlights New York State's activities relative to eleven other states. Eleven research-intensive

¹³³ A. Lockett & M. Wright *supra* note 22 as cited in Phan and Siegel *supra* note 61 at 93.

¹³⁴ Hill *supra* note 63 at 31.

¹³⁵ L. Zucker et. al., *Intellectual Human Capital and the Birth of U.S. Biotechnology Enterprises*, 88 AMERICAN ECONOMIC REVIEW 290-306 (1998) as cited in Hill *supra* note 63 at 31.

¹³⁶ D. Di Gregorio & S. Shane *supra* note 63 as cited in Hill at 31.

AUTM Data, available at: http://www.autm.net/surveys/dsp.surveyDetail.cfm?pid=16, http://www.autm.net/surveys/dsp.surveyDetail.cfm?pid=33, http://www.autm.net/surveys/dsp.surveyDetail.cfm?pid=28 (last visited April 21, 2007).

states were chosen for this analysis: California, Massachusetts, Texas, Illinois, Florida, North Carolina, Michigan, Washington, Georgia, Minnesota, and Wisconsin.

The ratios were calculated from the relationships between the following data: Total Sponsored Research Expenditures/Invention Disclosures; Total Sponsored Research Expenditures/Patent Applications Filed; Total Sponsored Research Expenditures/Issued Patents; Total Sponsored Research Expenditures/Start-Up Formations; Total Sponsored Research Expenditures/ Licensing Income; and Total Sponsored Research Expenditures/Number of Licenses and Options Executed. These ratios were then used to develop an index by inversing the ratio and adding a constant to assign a 1 to the most effective state in each category. For example, if the highest activity per research expenditure ratio is 0.75, then a constant of 0.25 was added to all the activities per research expenditure ratios of other 11 states. However, if the highest activity ratio was 1.25, then .25 was subtracted.

2.4.1 Total Sponsored Research Expenditures/Inventions Disclosures

The Total Sponsored Research Expenditures/Invention Disclosures ratio represents the amount of research expenditure that was required for one invention disclosure. For the years 2003, 2004, and 2005 New York universities' average research expenditure per invention disclosure was approximately \$2.46 million, \$2.41 million, and \$2.61 million. The average for all twelve states was \$2.5 million in 2003, \$2.31 million in 2004, and \$2.44 million in 2005. The average state ratio for all three years was \$2.42 million research expenditure for one invention disclosure. The Invention Disclosure Index for New York State is .20 in 2003, .17 in 2004, and .83 in 2005.

2003 Invention Disclosure Ratio and Index

	Total		Expenditure		Invention	
	Sponsored		per Invention		Disclosures	
	Research	Invention	Disclosure		Received per	
	Expenditure	Disclosures	Received		Million Dollar	Invention
State	(millions)	Received	(millions)	Rank	Expenditure	Disclosures Index
California	\$1,683	2024	\$0.83	1	1.2	1
Wisconsin	\$815	452	\$1.80	2	0.55	0.35
Washington	\$902	237	\$2.00	3	0.26	0.06
N. Carolina	\$1,249	570	\$2.18	4	0.46	0.25
Minnesota	\$509	218	\$2.34	5	0.43	0.23
Florida	\$1,230	507	\$2.43	6	0.41	0.21
New York	\$1,903	773	\$2.46	7	0.41	0.2
Georgia	\$1,056	426	\$2.48	8	0.4	0.2
Massachusetts	\$2,342	939	\$2.50	9	0.4	0.2
Texas	\$2,113	744	\$2.84	10	0.35	0.15
Illinois	\$1,439	469	\$3.07	11	0.33	0.12
Michigan	\$1,315	404	\$3.26	12	0.31	0.1
Sum	\$16,554	7763	\$29.97		5.51	
Avg	\$1,380	647	\$2.50		0.46	

2004 Invention Disclosure Index

	Total				Invention	
	Sponsored		Expenditure		Disclosures	
	Research	Invention	per Invention		Received per	Invention
	Expenditure	Disclosures	Disclosure		Million Dollar	Disclosures
State	(millions)	Received	(millions)	Rank	Expenditure	Index
California	\$1,783	2222	\$0.80	1	1.246	1
Massachusetts	\$1,576	1014	\$1.55	2	0.643	0.4
Wisconsin	\$875	459	\$1.91	3	0.525	0.28
Florida	\$1,361	599	\$2.27	4	0.44	0.19
Minnesota	\$515	224	\$2.30	5	0.435	0.19
Georgia	\$1,163	499	\$2.33	6	0.429	0.18
N. Carolina	\$1,323	568	\$2.33	6	0.429	0.18
New York	\$2,105	873	\$2.41	8	0.415	0.17
Michigan	\$1,339	539	\$2.48	9	0.402	0.16
Texas	\$1,751	622	\$2.81	10	0.355	0.11
Illinois	\$1,526	530	\$2.88	11	0.347	0.1
Washington	\$959	261	\$3.67	12	0.272	0.03
Sum	\$16,275	8,410	\$27.76		5.94	
Average	\$1,356	701	\$2.31		0.495	

2005 Invention Disclosure Index

	Total				Invention	
	Sponsored				Disclosures	
	Research	Invention	Expenditure		Received per	Invention
	Expenditure	Disclosures	per Disclosure		Million Dollar	Disclosures
State	(millions)	Received	(millions)	Rank	Expenditure	Index
California	\$3,740	2,073	\$1.80	1	0.55	1
Georgia	\$1,162	566	\$2.05	2	0.49	0.94
Florida	\$1,421	651	\$2.18	3	0.46	0.91
Minnesota	\$548	251	\$2.18	3	0.46	0.91
N. Carolina	\$1,265	557	\$2.27	5	0.44	0.89
Washington	\$1,527	622	\$2.45	6	0.41	0.86
Michigan	\$1,379	534	\$2.58	7	0.39	0.84
New York	\$2,172	833	\$2.61	8	0.38	0.83
Massachusetts	\$2,661	966	\$2.75	9	0.36	0.81
Texas	\$1,877	666	\$2.82	10	0.35	0.8
Illinois	\$1,573	526	\$2.99	11	0.33	0.78
Wisconsin	\$904	44	\$20.55	12	0.05	0.5
Sum	\$20,229	8,289	\$47.25		4.68	
Avg	\$1,686	691	\$3.94		0.3897	

2.4.2 Total Sponsored Research Expenditure/Patent Applications Filed

This ratio and index measures the relationship between the research expenditures and filing of patent applications. For the years 2003, 2004, and 2005 New York State expended approximately \$4.30, \$4.29, and \$3.62 million respectively for every patent application filed. The average amount for all twelve states was \$5.27 million in 2003, \$4.35 million in 2004, and \$4.83 million in 2005 for one patent application. The average state ratio during the years of 2003-2005 was \$4.82 million. New York State's Patent Application Filed Index for 2003-2005 is .59, .42, and .92.

2003 Patent Application Filed Ratio and Index

	Total				Patent	
	Sponsored		Expenditure		Applications	
	Research	Patent	per Patent		Filed per	Patent
	Expenditure	Applications	Application		Million Dollar	Applications
State	(millions)	Filed	(millions)	Rank	Expenditure	Filed Index
California	\$1,683	1081	\$1.56	1	0.642	1
Florida	\$1,230	356	\$3.45	2	0.289	0.65
N. Carolina	\$1,249	308	\$4.05	3	0.247	0.6
New York	\$1,903	442	\$4.30	4	0.232	0.59
Massachusetts	\$2,342	486	\$4.82	5	0.208	0.57
Wisconsin	\$815	166	\$4.91	6	0.204	0.56
Georgia	\$1,056	210	\$5.03	7	0.199	0.56
Illinois	\$1,439	260	\$5.53	8	0.181	0.54
Texas	\$2,113	328	\$6.44	9	0.155	0.51
Michigan	\$1,315	198	\$6.64	10	0.151	0.51
Minnesota	\$509	72	\$7.06	11	0.142	0.5
Washington	\$902	96	\$9.40	12	0.106	0.46
Sum	\$16,554	4003	\$63.20		2.755	
Avg	\$1,380	334	\$5.27		0.23	

2004 Patent Application Filed Ratio and Index

	Total Sponsored		Expenditure		Patent Applications	
	Research	Patent	per Patent		Filed per	Patent
	Expenditure	Applications	Application		Million Dollar	Applications
State	(millions)	Filed	(millions)	Rank	Expenditure	Filed Index
California	\$1,783	1447	\$1.23	1	0.812	1
Massachusetts	\$1,576	580	\$2.72	2	0.368	0.56
Georgia	\$1,163	421	\$2.76	3	0.362	0.55
Florida	\$1,361	429	\$3.17	4	0.315	0.5
New York	\$2,105	491	\$4.29	5	0.233	0.42
N. Carolina	\$1,323	277	\$4.77	6	0.209	0.4
Wisconsin	\$875	181	\$4.83	8	0.207	0.4
Texas	\$1,751	362	\$4.84	7	0.207	0.4
Illinois	\$1,526	291	\$5.25	9	0.191	0.38
Michigan	\$1,339	248	\$5.40	10	0.185	0.37
Minnesota	\$515	83	\$6.21	11	0.161	0.35
Washington	\$959	143	\$6.71	12	0.149	0.34
Sum	\$16,275	\$4,953	\$52.17		3.4	
Average	\$1,356	\$413	\$4.35		0.283	

2005 Patent Applications Filed Ratio and Index

	Total		T		Patent	
	Sponsored		Expenditure		Applications	
	Research	Patent	per Patent		Filed per	Patent
	Expenditure	Applications	Application		Million Dollar	Applications
State	(millions)	Filed	(millions)	Rank	Expenditure	Filed Index
Georgia	\$1,162	423	\$2.75	1	0.36	1
California	\$3,740	1,239	\$3.02	2	0.33	0.97
Florida	\$1,421	404	\$3.52	3	0.28	0.92
New York	\$2,172	600	\$3.62	4	0.28	0.92
Wisconsin	\$904	213	\$4.24	5	0.24	0.88
Massachusetts	\$2,661	601	\$4.43	6	0.23	0.87
Michigan	\$1,379	279	\$4.94	7	0.2	0.84
Illinois	\$1,573	294	\$5.35	8	0.19	0.83
Minnesota	\$548	98	\$5.59	9	0.18	0.82
Texas	\$1,877	329	\$5.71	10	0.18	0.82
N. Carolina	\$1,265	178	\$7.11	11	0.14	0.78
Washington	\$1,527	198	\$7.71	12	0.13	0.77
Sum	\$20,229	4,856	\$57.98		2.73	
Avg	\$1,686	405	\$4.83		0.2276	

2.4.3 Total Sponsored Research Expenditure/Issued Patents

This ratio and index measures the relationship between research expenditures and issued patents. For the years 2003, 2004, and 2005 New York State universities on the average spent \$10.75, \$12.83, and \$14.58 million respectively for every issued patent. The average for all twelve states was \$7.98 million in 2003, \$11.23 million in 2004, and \$12.45 million in 2005. The average for all states during the years of 2003-2005 was \$10.55 million. New York State's Issued Patent Index for 2003-2005 is .71, .78, and .93.

2003 Issued Patent Ration and Index

	Total					
	Sponsored		Expenditure		Issued Patents	
	Research		per Issued		per Million	Patents
	Expenditure	Issued	Patent		Dollar	Issued
State	(millions)	Patents	(millions)	Rank	Expenditure	Index
California	\$1,683	643	\$2.62	1	0.382	1
N. Carolina	\$1,249	152	\$8.22	2	0.122	0.74
Massachusetts	\$2,342	267	\$8.77	3	0.114	0.73
Wisconsin	\$815	90	\$9.06	4	0.11	0.73
Georgia	\$1,056	116	\$9.10	5	0.11	0.73
Minnesota	\$509	54	\$9.43	6	0.106	0.72
Illinois	\$1,439	137	\$10.50	7	0.095	0.71
Florida	\$1,230	117	\$10.51	8	0.095	0.71
New York	\$1,903	177	\$10.75	9	0.093	0.71
Michigan	\$1,315	114	\$11.54	10	0.087	0.7
Texas	\$2,113	144	\$14.67	11	0.068	0.69
Washington	\$902	61	\$14.79	12	0.068	0.69
Sum	\$16,554	2072	\$119.95		1.45	
Avg	\$1,380	173	\$7.98		0.121	

2004 Issued Patent Ratio and Index

State	Total Sponsored Research Expenditure (millions)	Issued Patents	Expenditure Per Patent Issued (millions)	Rank	Issued Patents per Million Dollars Expenditure	Patents Issued Index
California	\$1,783	528	\$3.38	1	0.296	1
Massachusetts	\$1,576	255	\$6.18	2	0.162	0.87
Wisconsin	\$875	100	\$8.75	3	0.114	0.82
Florida	\$1,361	149	\$9.13	4	0.109	0.81
Michigan	\$1,339	135	\$9.92	5	0.101	0.8
N. Carolina	\$1,323	129	\$10.25	6	0.098	0.8
Texas	\$1,751	151	\$11.59	7	0.086	0.79
New York	\$2,105	164	\$12.83	8	0.078	0.78
Minnesota	\$515	38	\$13.55	9	0.074	0.78
Georgia	\$1,163	81	\$14.35	10	0.07	0.77
Illinois	\$1,526	106	\$14.40	11	0.069	0.77
Washington	\$959	47	\$20.40	12	0.049	0.75
Sum	16,275	1,883	\$134.75		1.306	
Average	1,356	157	\$11.23		0.109	

2005 Issued Patent Ratio and Index

	Total					
	Sponsored		Expenditure		Patents	
	Research		Per Patent		Issued per	Patents
	Expenditure	Issued	Issued		million dollars	Issued
State	(millions)	Patents	(millions)	Rank	Expenditure	Index
California	\$3,740	517	\$7.23	1	0.14	1
Wisconsin	\$904	94	\$9.62	2	0.1	0.96
North Carolina	\$1,265	125	\$10.12	3	0.1	0.96
Florida	\$1,421	136	\$10.45	4	0.1	0.96
Michigan	\$1,379	129	\$10.69	5	0.09	0.95
Minnesota	\$548	51	\$10.75	6	0.09	0.95
Massachusetts	\$2,661	230	\$11.57	7	0.09	0.95
Georgia	\$1,162	83	\$14.00	8	0.07	0.93
New York	\$2,172	149	\$14.58	9	0.07	0.93
Illinois	\$1,573	107	\$14.70	10	0.07	0.93
Texas	\$1,877	120	\$15.64	11	0.06	0.92
Washington	\$1,527	76	\$20.09	12	0.05	0.91
Sum	\$20,229	1,817	\$149.44		1.03	
Avg	\$1,686	151	\$12.45		0.086	

2.4.4 Total Sponsored Research Expenditure/Start-Up Formations

New York Sate's ratio for total sponsored research expenditure to start-up formations for the years 2003, 2004, and 2005 was \$76.12, \$72.58, and \$103 million. The average for all twelve states was \$140.20 million in 2003, \$102.15 million in 2004, and \$146 million in 2005. The average for all states during the years of 2003-2005 was \$129.45 million. New York State's Start-Up Formation Index for the years 2003-2005 is .85, .92, and .99.

2003 Start-Up Company Ratio and Index

					Start-up	
	Total Sponsored		Expenditure		Formation	
	Research		per Startup		per Million	Start-up
	Expenditure	Start-up	Formation		Dollars	Formations
State	(millions)	Formations	(millions)	Rank	Expenditure	Index
California	\$1,683	47	\$35.81	1	0.028	1
Georgia	\$1,056	14	\$75.43	2	0.013	0.85
New York	\$1,903	25	\$76.12	3	0.013	0.85
N. Carolina	\$1,249	16	\$78.06	4	0.013	0.85
Florida	\$1,230	13	\$94.62	5	0.011	0.83
Massachusetts	\$2,342	23	\$101.83	6	0.01	0.82
Texas	\$2,113	20	\$105.65	7	0.009	0.82
Michigan	\$1,315	11	\$119.55	8	0.008	0.8
Minnesota	\$509	4	\$127.25	9	0.008	0.8
Illinois	\$1,439	9	\$159.89	10	0.006	0.78
Washington	\$902	3	\$300.67	11	0.003	0.75
Wisconsin	\$815	2	\$407.50	12	0.002	0.75
Sum	\$16,554	187	\$1,682.36		0.125	
Avg	\$1,380	16	\$140.20		0.01	

2004 Start-Up Company Formation Ratio and Index

					Start-up	
	Total Sponsored		Expenditure		Formation	
	Research		per Startup		per Million	Start-up
	Expenditure	Start-up	Formation		Dollars	Formations
State	(millions)	Formations	(millions)	Rank	Expenditure	Index
Massachusetts	\$1,576	35	\$45.04	1	0.0222	1
California	\$1,783	35	\$50.93	2	0.0196	0.97
Georgia	\$1,163	20	\$58.13	3	0.0172	0.95
Michigan	\$1,339	23	\$58.22	4	0.0172	0.95
N. Carolina	\$1,323	21	\$62.98	5	0.0159	0.94
New York	\$2,105	29	\$72.58	6	0.0138	0.92
Illinois	\$1,526	17	\$89.79	7	0.0111	0.89
Florida	\$1,361	15	\$90.73	8	0.011	0.89
Texas	\$1,751	18	\$97.26	9	0.0103	0.88
Washington	\$959	7	\$137.00	10	0.0073	0.85
Minnesota	\$515	3	\$171.69	11	0.0058	0.84
Wisconsin	\$875	3	\$291.51	12	0.0034	0.81
Sum	16,275	226	\$1,225.86		0.155	
Average	1,356	19	\$102.15		0.013	

2005 Start-Up Company Formation Ratio and Index

	Total Sponsored Research Expenditure	Start-up	Expenditure per Startup Formation		Start-up Formation per Million Dollars	Start-up Formations
State	(millions)	Formations	(millions)	Rank	Expenditure	Index
Florida	\$1,421	22	\$64	1	0.0156	1
Georgia	\$1,162	15	\$77	2	0.013	0.9974
Massachusetts	\$2,661	34	\$78	3	0.0128	0.9972
California	\$3,740	42	\$89	4	0.0112	0.9956
N. Carolina	\$1,265	14	\$90	5	0.0111	0.9955
New York	\$2,172	21	\$103	6	0.0097	0.9941
Texas	\$1,877	18	\$104	7	0.0096	0.994
Michigan	\$1,379	13	\$106	8	0.0094	0.9938
Illinois	\$1,573	13	\$121	9	0.0083	0.9927
Wisconsin	\$904	6	\$150	10	0.0067	0.9911
Washington	\$1,527	7	\$218	11	0.0046	0.989
Minnesota	\$548	1	\$548	12	0.0018	0.9862
Sum	\$20,229	206	\$1,748		0.1139	
Avg	\$1,686	17	\$146		0.0095	

2.4.5 Total Sponsored Research Expenditure/License Income

This ratio and index measures the amount of research expenditure required to obtain one million dollars of licensing income. New York's ratio for total sponsored research expenditure per one million of license income for the years 2003, 2004, and 2005 was \$14.36, \$12.36, and \$0.69 million respectively. The average for all twelve states was \$35.47 million in 2003, \$32.30 million in 2004, and \$216.33 million in 2005. The average for all states during the years of 2003-2005 was \$94.7 million. New York State's License Income Index for the years 2003-2005 is .91, .92, and 1.

2003 License Income Ration and Index

	Total Sponsored	License	Expenditure per		License Income	
	Research	Income	\$1 Million		per Million	License
	Expenditure	Received	License Income		Dollar	Income
State	(millions)	(millions)	(millions)	Rank	Expenditure	Index
California	\$1,683	\$132.58	\$12.69	1	0.079	1
Minnesota	\$509	\$37.49	\$13.58	2	0.074	0.95
New York	\$1,903	\$132.49	\$14.36	3	0.07	0.91
Florida	\$1,230	\$61.46	\$20.01	4	0.05	0.71
Wisconsin	\$815	\$38.32	\$21.27	5	0.047	0.68
Michigan	\$1,315	\$45.95	\$28.62	6	0.035	0.56
Washington	\$902	\$29.44	\$30.64	7	0.033	0.54
Massachusetts	\$2,342	\$66.00	\$35.48	8	0.028	0.49
Georgia	\$1,056	\$29.31	\$36.03	9	0.028	0.49
N. Carolina	\$1,249	\$30.69	\$40.70	10	0.025	0.46
Texas	\$2,113	\$32.92	\$64.19	11	0.016	0.37
Illinois	\$1,439	\$13.32	\$108.03	12	0.009	0.3
Sum	\$16,554	\$650	\$426		0.492	
Avg	\$1,380	\$54	\$35.47		0.041	

2004 License Income Ratio and Index

	Total Sponsored	License	Expenditure per		License	
	Research	Income	\$1 Million		Income per	License
	Expenditure	Received	License Income		Million Dollar	Income
State	(millions)	(millions)	(millions)	Rank	Expenditure	Index
Minnesota	\$515	\$46	\$11.31	1	0.088	1
New York	\$2,105	\$170	\$12.36	2	0.081	0.92
California	\$1,783	\$135	\$13.24	3	0.076	0.87
Wisconsin	\$875	\$48	\$18.09	4	0.055	0.67
Massachusetts	\$1,576	\$72	\$21.74	5	0.046	0.58
Florida	\$1,361	\$54	\$25.13	6	0.04	0.51
Michigan	\$1,339	\$50	\$26.69	7	0.037	0.49
North Carolina	\$1,323	\$47	\$27.99	8	0.036	0.47
Georgia	\$1,163	\$33	\$35.07	9	0.029	0.4
Washington	\$959	\$23	\$41.51	10	0.024	0.36
Texas	\$1,751	\$29	\$61.07	11	0.016	0.28
Illinois	\$1,526	\$16	\$93.33	12	0.011	0.22
Sum	\$16,275	\$724	\$387.55		0.539	
Average	\$1,356	\$60	\$32.30		0.045	

2005 License Income Ratio and Index

					License	
	Total Sponsored	License	Expenditure per		Income Per	
	Research	Income	\$1 Million		Million	License
	Expenditure	Received	License Income		Dollar	Income
State	(millions)	(millions)	(millions)	Rank	Expenditure	Index
New York	\$2,172	\$3,155	\$0.69	1	1.4526	1
Georgia	\$1,162	\$591	\$1.97	2	0.5086	-0.3966
Minnesota	\$548	\$46	\$11.91	3	0.0839	-0.8213
N. Carolina	\$1,265	\$58	\$21.81	4	0.0458	-0.8594
Washington	\$1,527	\$62	\$24.63	5	0.0406	-0.8646
Massachusetts	\$2,661	\$87	\$30.59	6	0.0327	-0.8725
Florida	\$1,421	\$45	\$31.58	7	0.0317	-0.8735
Michigan	\$1,379	\$42	\$32.83	8	0.0305	-0.8747
California	\$3,740	\$100	\$37.40	9	0.0267	-0.8785
Texas	\$1,877	\$34	\$55.21	10	0.0181	-0.8871
Illinois	\$1,573	\$18	\$87.39	11	0.0114	-0.8938
Wisconsin	\$904	\$0.40	\$2,260.00	12	0.0004	-0.9048
Sum	\$20,229	\$4,238	\$2,596.00		2.2831	
Avg	\$1,686	\$353	\$216.33		0.1903	

2.4.6 Total Sponsored Research Expenditure/Licenses and Options Executed

This ratio and index measures the relationship between research dollars expended and the number of licenses and options executed. New York State's ratio for total sponsored research expenditure to execute one license and option for the years 2003, 2004, and 2005 was \$13.89, \$10.17, and \$8.17 million. The average for all twelve states was \$9.18 million in 2003, \$8.39 million in 2004, and \$9.01 million in 2005. The average for all states during the years of 2003-2005 was \$8.86 million. New York State's License and Option Executed Index for the years 2003-2005 is .80, .84, and .87.

2003 Licenses and Options Executed Ratio and Index

					Licenses and		
			Expenditure		Options	License	
	Total Sponsored	Licenses	Per License		Executed per	and	
	Research	and	and Options		Million	Options	
	Expenditure	Options	Executed		Dollars	Executed	
State	(millions)	Executed	(millions)	Rank	Expenditure	Index	
California	\$1,683	452	\$3.72	1	0.27	1	
Wisconsin	\$815	195	\$4.18	2	0.24	0.97	
N. Carolina	\$1,249	183	\$6.82	3	0.15	0.88	
Georgia	\$1,056	148	\$7.14	4	0.14	0.87	
Texas	\$2,113	275	\$7.68	5	0.13	0.86	
Massachusetts	\$2,342	267	\$8.77	6	0.11	0.85	
Minnesota	\$509	56	\$9.08	7	0.11	0.84	
Illinois	\$1,439	130	\$11.07	8	0.09	0.82	
Michigan	\$1,315	118	\$11.14	9	0.09	0.82	
Washington	\$902	72	\$12.53	10	0.08	0.81	
New York	\$1,903	137	\$13.89	11	0.07	0.8	
Florida	\$1,230	87	\$14.14	12	0.07	0.8	
Sum	\$16,554	2120	\$110.16		1.55		
Avg	\$1,380	177	\$9.18		0.13		

2004 License and Options Executed

					Licenses and		
			Expenditure		Options		
	Total Sponsored		Per License		Executed Per	License and	
	Research	Licenses and	and Option		Million	Option	
	Expenditure	Options	Executed		Dollars	Executed	
State	(millions)	Executed	(millions)	Rank	Expenditure	Index	
California	\$1,783	468	\$3.81	1	0.263	1	
Wisconsin	\$875	206	\$4.25	2	0.236	0.97	
Minnesota	\$515	100	\$5.15	3	0.194	0.93	
Massachusetts	\$1,576	260	\$6.06	4	0.165	0.9	
N. Carolina	\$1,323	178	\$7.43	5	0.135	0.87	
Georgia	\$1,163	137	\$8.49	6	0.118	0.86	
Michigan	\$1,339	145	\$9.24	7	0.108	0.85	
Texas	\$1,751	177	\$9.89	8	0.101	0.84	
New York	\$2,105	207	\$10.17	9	0.098	0.84	
Illinois	\$1,526	139	\$10.98	10	0.091	0.83	
Washington	\$959	87	\$11.02	11	0.091	0.83	
Florida	\$1,361	96	\$14.18	12	0.071	0.81	
Sum	\$16,275	2200	100.66		1.67		
Average	\$1,356	183	8.39		0.139		

2005 Licenses and Options Executed

					Licenses and		
	Total		Expenditure		Options		
	Sponsored		Per License		Executed Per	License and	
	Research	Licenses and	and Option		Million	Option	
	Expenditure	Options	Executed		Dollars	Executed	
State	(millions)	Executed	(millions)	Rank	Expenditure	Index	
Wisconsin	\$904	221	\$4.09	1	0.24	1	
Minnesota	\$548	82	\$6.68	2	0.15	0.91	
Georgia	\$1,162	161	\$7.22	3	0.14	0.9	
N. Carolina	\$1,265	162	\$7.81	4	0.13	0.89	
Michigan	\$1,379	169	\$8.16	5	0.12	0.88	
New York	\$2,172	248	\$8.76	6	0.11	0.87	
Texas	\$1,877	213	\$8.81	7	0.11	0.87	
Washington	\$1,527	168	\$9.09	8	0.11	0.87	
California	\$3,740	380	\$9.84	9	0.1	0.86	
Massachusetts	\$2,661	249	\$10.69	10	0.09	0.85	
Florida	\$1,421	127	\$11.19	11	0.09	0.85	
Illinois	\$1,573	100	\$15.73	12	0.06	0.82	
Sum	\$20,229	2,280	\$108.07		1.47		
Avg	\$1,686	190	\$9.01		0.1224		

2.4.7 Summary of AUTM Data

The summary of the data results shows the relative technology transfer performance in relation to the amount of research expenditure available to New York universities as measured against eleven other states. New York's performance is categorized into three performance measures: high performance; average performance; and low performance. Ranking 1st-4th is considered a high performance; 5th-8th is average performance; 9th-12th is low performance. The table, New York State's Technology Transfer Performance, 2003-2005 identifies how New York performed in the listed activities.

In 2003, New York had a high performance in the areas of patent applications filed, start-up company formation, and license income, average performance in invention disclosure, and low performance in issued patents and license executed.

In 2004, New York had a high performance in license income, average performance in invention disclosure, issued patents, and start-up formation, and low performance in licenses executed.

In 2005, New York had high performance in the areas of patent applications filed and license income, average performance in invention disclosure, start-up formation, and licenses executed, and low performance in issued patents.

New York State's Technology Transfer Performance, 2003-2005

	2003			2004			2005		
	High	Average	Low	High	Average	Low	High	Average	Low
Invention Disclosure		X			X			X	
Patent Application	X				X		X		
Issued Patents			X		X				X
Start-Up Formation	X				X			X	
License Income	X			X			X		
License Executed			X			X		X	

2.5 Intellectual Property Ownership Initiatives

A current point of debate is the role of "open source" licensing in academic research. Open source is a term which originated in computer software, and refers to a model where an inventor's creations are made freely available to the public, and may be modified or used within relatively "open" licensing terms. This is potentially at odds with the Bayh-Dole Act, which seeks to create economic stimulation through the privatization of university research. Under Bayh-Dole, universities are encouraged to commercialize their research with private industry, leading to both profit and development of the technology to benefit the public though economic incentive. In contrast, open source points a path to economic growth and public benefit through the distribution of knowledge to the public, proposing faster development through open information and common tools rather than closed proprietary models.

2.5.1 Introduction to Open Source

The term "open source" refers to a licensing model that began in computer software, which allows for users and developers to have full access to the "source code" behind a program, so that they may build upon it, improve it, and share it. ¹⁴¹ The Open Source Initiative describes the basic idea behind open source as follows: "When programmers can read, redistribute, and modify the source code for a piece of software, the software evolves. People improve it, people adapt it, people fix the bugs. And this can happen at a speed that, if one is used to the slow pace of conventional software development, seems astonishing."

¹³⁸ The Open Informatics Petition, http://www.oreillynet.com/pub/a/network/2002/01/11/openinfo.html

¹³⁹ Salon.com, *Public Money, Private Code*, http://dir.salon.com/story/tech/feature/2002/01/04/university open source/index.html?pn=3.

¹⁴⁰ *Id*.

¹⁴¹ Open Source Initiatives, available at: http://www.opensource.org/ (last visited April 23, 2007).

¹⁴² *Id*.

The Linux operating system is perhaps the largest success story in the world of open source software. Built from the ground up by a community of developers using the open source model, a "free" operating system was developed which rivals or exceeds commercial competitors. Major technology companies such as IBM have embraced open source software, including it in their product offerings.

More recently, the idea has been adapted to creative works and ideas, through initiatives like Creative Commons and Science Commons. The underlying idea as that knowledge can be shared and built upon in the same way as computer software, accelerating growth and serving the public good. 146

It is important to note a distinction between open source and the public domain. When an author gives his or her work to the public domain, all intellectual property rights in that work are surrendered. Open source, however, is a form of license which grants rights to use the work under certain conditions, and for certain purposes. At a minimum, this generally includes the right to redistribute the work freely, and to build upon and improve the work. Similarly, not all open source software is free; while the underlying source cannot be sold, value-added services and customizations can be commercialized.

2.5.2 Creative Commons

Creative Commons is a non-profit corporation founded in 2001 by a group of cyberlaw and intellectual property law experts from Harvard's Berkman Center for

¹⁴³ http://www.linux.org/info/

¹⁴⁴ *Id*.

¹⁴⁵ Internet News.com, *IBM's Open Source Muse*, http://www.internetnews.com/devnews/article.php/3613411.

¹⁴⁶ Internet News.com, *Science Commons Develops Legal and Technical Tools for Sharing Scientific Innovation*, http://xml.coverpages.org/ni2004-12-31-a.html.

¹⁴⁷ GNUP Project, *Categories of Free and Non-Free Software*, http://www.gnu.org/philosophy/categories.html.

¹⁴⁸ *Id*.

¹⁴⁹ CIO.com, *Free Code for Sale: The New Business of Open Source*, http://www.cio.com/archive/021506/opensource.html.

Internet & Society and Stanford Law School's Center for Internet and Society, including Lawrence Lessig. 150 It was established to create new alternative copyright licensing methods that reflect the changing role of content published through digital means. 151 Inspired by Free Software Foundation's GNU General Public License (GNU GPL), Creative Commons has created a web application that allows content owners to generate licenses that reserve certain rights while granting others. 152

There are six basic Creative Commons licenses, based on permutation of three declared rights: attribution, commercial use, and the ability to reuse the content in other works. Attribution, which is part of all six licenses, requires that the work be credited to the author or owner. Commercial use allows a content owner to restrict reuse of their content to non-commercial use. The final attribute, reuse, has three levels: 1) no derivatives, 2) share alike, and 3) unrestricted. All six licenses allow content to be copied and redistributed; this criterion establishes the level of flexibility a user is granted in new creations they create from a work. No derivatives is the most restrictive, as it does not allow a user to make any changes to the work. Share alike allows a user to freely make changes, but their new creations must be redistributed under the same terms as the original work. Finally, a content owner may leave this unrestricted, allowing users to create derivative works and distribute them freely.

¹⁵⁰ Creative Commons, Frequently Asked Questions, http://wiki.creativecommons.org/FAQ

¹⁵¹ *Id*.

¹⁵² *Id*.

¹⁵³ Creative Commons, *About Us.* http://creativecommons.org/about/licenses/meet-the-licenses.

¹⁵⁴ *Id*.

¹⁵⁵ *Id*.

¹⁵⁶ *Id*.

¹⁵⁷ *Id*.

¹⁵⁸ *Id*.

¹⁵⁹ *Id*.

Other specialized licenses also exist, including a sampling license, which allows for small amounts of a work to be remixed into a new work, a public domain dedication license, which strips all copyright protection from a work, and a founders copyright, which removes copyright protection for a limited duration of time. A developing nations license allows for a dual license, establishing less restrictive copyright terms for poorer nations, while retaining greater rights in wealthy countries. A specialized music sharing license allows users to download, share, and webcast music, but not modify or sell it. Localized versions of the Creative Commons licenses have been created for thirty-five nations, addressing the differences in copyright law in various jurisdictions.

Creative Commons has been used by a number of online resources, from entertainment to research, including Flickr, the Internet Archive, MTI OpenCourseWare, Clinical Skills Online, the Public Library of Science, and the Proceedings of Science. However, the non-commercial use component of the license has drawn criticism from free software advocates such as Richard Stallman, and computer columnist John C. Dvorak. The core of the criticism is that this component is unnecessarily restrictive, as it would allow a non-commercial website to redistribute a piece of content freely, while making the single redistribution of the same content on a commercial network a violation of the license. Fair use, which provides an affirmative defense for the transformative reuse of content, uses the commercial nature of a use as a consideration, but it is not determinative. The concern is that wide adoption of Creative Commons licensing may erode fair use, as content will be distributed with these specific license terms. The concern is that wide adoption of Creative Commons licensing may erode fair use, as content will be distributed with these specific license terms.

¹⁶⁰ Id.

¹⁶¹ *Id*.

¹⁶² Creative Commons, Worldwide, http://creativecommons.org/worldwide.

¹⁶³ Creative Commons, *Featured Products*, http://creativecommons.org/featured-projects.

¹⁶⁴ Free Software Foundation, *Freeworks in Montreal*, http://www.fsf.org/blogs/rms/entry-20050920.html; PC Magazine, *Creative commons Hamburg*, http://www.pcmag.com/article2/0,1895,1838244,00.asp.

¹⁶⁵ *Id*.

^{166 17} USC §107

¹⁶⁷ http://www.pcmag.com/article2/0,1895,1838244,00.asp

The other primary criticism is ethical. Unlike other forms of open source licensing, Creative Commons does not have baseline standards common among all licenses. For example, the Gnu Public License (GPL) requires that software issued under its license contain the following four freedoms:

- The freedom to run the program, for any purpose (freedom 0).
- The freedom to study how the program works, and adapt it to your needs (freedom 1). Access to the source code is a precondition for this.
- The freedom to redistribute copies so you can help your neighbor (freedom 2).
- The freedom to improve the program, and release your improvements to the public, so that the whole community benefits (freedom 3). Access to the source code is a precondition for this. 168

Creative Commons has only one universal right, the right to redistribute copies, which may be limited to non-commercial purposes.

2.5.3 Science Commons

The Science Commons initiative was started in 2005 as a branch of the Creative Commons and currently resides at the Massachusetts Institute of Technology. The goal of this initiative is to encourage scientific innovation by removing barriers to the flow of scientific information that is shared between scientists, universities, and enterprises. The Science Commons stemmed from the realization that intellectual property rights, although created with good intentions, often hindered the free flow of information, which is what science depends on. Such consequences-non-standard licenses that complicate transactions, burdensome transfer agreements that slow down the experimentation process, or increased costs due to legal fees ultimately result in less research, less innovation, and less dissemination of knowledge.

¹⁶⁸ GNU Project, *The Free Software Definition*, http://www.gnu.org/philosophy/free-sw.html.

¹⁶⁹ Science Commons, available at http://www.sciencecommons.org/about/index.html (last visited on Feb. 11, 2007).

¹⁷⁰ *Id*.

¹⁷¹ *Id*.

¹⁷² *Id*.

The Science Commons focuses on three key areas that include scholarly publishing, licensing policies, and the "realization of the 'semantic web' for science." These areas correspond to three projects in their early stages. The first is the Scholar's copyrights project which aims to create open-access to scholarly research that generates data, journal articles deciphering the data, and metadata that describes the underlying data. Despite the advances in current technology such as the internet, these scholarly communications often remain inaccessible, largely due to agreements between publishers and universities that prohibit the use of information technology on scholarly resources. Part of the solution to this problem entails funding for scientists to archive publications on the internet, advocating access to the archives of scholarly research for academic use in academia, and utilizing technology to create user friendly software enabling easy archiving along with "how-to" guides. The semantic scientists are scholarly research for academic use in academia, and utilizing technology to create user friendly software enabling easy archiving along with "how-to" guides.

The second project is the Biological Materials Transfer project, which aims to lessen the restrictions on biological material (i.e. genes, proteins, software, "know-how", etc.) research due to complex licensing agreements. ¹⁷⁶ Biological materials are transferred between providers and recipient institutions for use in biological research through material transfer agreements (MTAs). ¹⁷⁷ The Uniform Biological Materials Transfer Agreement (UBMTA), which are widely used, fail to lessen transaction costs because single, standard contracts do not always cover enough types of biological material transfers, and many view the terms of such agreements as overly complex. ¹⁷⁸

The goal of the Biological Materials Transfer Project is to foster an environment of "low transaction costs and easily negotiated transfer of materials between institutions." This would entail keeping the current UBTMA as a baseline agreement,

¹⁷³ *Id*.

¹⁷⁴ *Id*.

¹⁷⁵ *Id*.

¹⁷⁶ Biological Materials Transfer Project, available at http://www.sciencecommons.org:81/projects/licensing/background.html (last visited on Feb. 11, 2006).

¹⁷⁷ Id.

¹⁷⁸ Id.

while providing a set of options and contractual terms that can be mixed and matched to create personalized agreements that fits a variety of transfer solutions. ¹⁸⁰ In addition, the agreements would ideally be understandable to lawyers and laypersons alike. ¹⁸¹

Finally, the NeuroCommons Project has three main goals: to demonstrate how scientific impact is directly related to open access of scientific information and innovation; to establish a framework that effectively uses funding for neurological research in a public and measurable manner; to develop an open community comprised of neuroscientists, research financiers, technologists, physicians, and patients who would disseminate the Neurocommons work openly and collaboratively. 182

2.5.4 IBM Open Source Initiative

¹⁸⁵ *Id*.

¹⁸⁶ Id.

For the past few years IBM has consistently held more US patents than any other company. In early January 2005 the company announced that it was offering free access to 500 patents to individuals, groups, communities and companies working on open software, provided that the usage conformed with the Open Source Initiative definition of open source software. IBM maintained that it would continue to allow such use of its patents in the future in order to encourage and protect "global innovation and interoperability through open standards." In addition, IBM recognized that technological advancement is dependent on shared "knowledge, standards, and collaborative innovation." Is dependent on shared "knowledge, standards, and collaborative innovation."

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Id.
Id.
Id.
Ivaliant Id.
Neurocommons Project, available at http://www.sciencecommons.org:81/projects/data/background.html (last visited on Feb. 11, 2006).
Peter Galli, IBM Gives 500 Patents to Open Source Developers, available at http://www.eweek.com/article2/0,1759,1750358,00.asp last visited on Mar. 6, 2005.
Id.
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Later in August 2005, IBM and the Kauffman Foundation, cosponsored a University and Industry Innovation Summit where participants evaluated common barriers to intellectual property. Participants made plans to form research relationships based on open collaboration models, in which researchers sought to create and disseminate software knowledge freely to the public. Building upon the idea of shared knowledge, the participants recognized that increased commercialization was dependent on improved university and industry intellectual property practices. Also, the partnerships formed among universities and industries tended to be complex due to challenges of intellectual property ownership. It was determined that these challenges could be mitigated by finding solutions concerning intellectual property practices, to address the various models of university-industry research: sponsored private, joint proprietary, and open collaboration. Ultimately, IBM, among other participants, advocated for more collaborative innovation between industry and universities.

By 2006, leaders from four information technology companies, seven American universities and the Kauffman Foundation collaborated to develop guiding principles to accelerate collaborative research for open source software. The guidelines outlined the Free Public Commons model that entails several key attributes. First, the intellectual property created in the collaboration must be freely available to collaborating parties for use in open source software, software related industry standards, software interoperability and other publicly available programs as determined by the parties. This also applies to

¹⁸⁷ Twelve Leaders Adopt Principles to Accelerate Innovation, http://www-304.ibm.com/jct09002c/university/scholars/news/open_collaboration.html last visited on Mar. 6, 2007.

¹⁸⁸ *Id*.

¹⁸⁹ *Id*.

¹⁹⁰ *Id*.

¹⁹¹ *Id*.

¹⁹² *Id*.

¹⁹³ *Id*.

¹⁹⁴ Open Collaboration Principles, available at http://www.kauffman.org/pdf/open_collaboration_principles_12_05.pdf (last visited on Mar. 6, 2007).

intellectual property owned by collaborating parties that is essential to implementing the opens source software or software related industry standards. Second, the collaborations should entail rules to protect both the public and the participant. For example, a party's right to use the intellectual property may be terminated if they use their own intellectual property to attack the implementation of the collaboration project. In addition, participants may retain ownership of their intellectual property, nor will they be restricted from transferring ownership as long as the public's rights are preserved in the transfer.

As part of IBM's Open Collaborative Research Program, which was announced in December 2006, IBM has partnered with Carnegie Mellon University, Columbia University, Georgia Institute of Technology, Purdue University, Rutgers University, University of California at Berkley, and the University of California at Davis. ¹⁹⁸ In effect, the collaboration will allow IBM researchers to collaborate with faculty and students at the universities on various projects without concern over IP management issues. ¹⁹⁹ In addition, the results of the collaboration and intellectual property developments will be made available openly and royalty-free. ²⁰⁰ Additional collaborators include the National Science Foundation, the Office of U.S. Senator Joseph Lieberman and the National Academies' Government University Industry Research Roundtable (GUIRR). ²⁰¹

¹⁹⁵ *Id*.

¹⁹⁶ *Id*.

¹⁹⁷ *Id*.

¹⁹⁸ IBM, Top Universities Continue Software Intellectual Property Reform, available at http://www-03.ibm.com/press/us/en/pressrelease/20772.wss last visited on Mar. 6, 2007.

¹⁹⁹ *Id*.

²⁰⁰ Id.

²⁰¹ Twelve Leaders Adopt Principles to Accelerate Innovation, http://www-304.ibm.com/jct09002c/university/scholars/news/open_collaboration.html.

3 California Intellectual Property Report

3.1 Background

In 2004, the California Legislature passed ACR 252, requesting that the California Council on Science and Technology "...create a special study group to develop recommendations to the Governor and the Legislature on how the state should treat intellectual property created under state contracts, grants, and agreements..." In January 2006, a report containing a series of recommendations for a statewide intellectual property policy was delivered to the California Legislature. While there have been several bills introduced to create a state intellectual property policy, none have passed into law. ²⁰³

3.2 Findings

The report stressed that state investment in university research should not be seen as a direct source of fiscal revenue. Other than in exceptional cases, royalties generated from inventions will not even exceed the costs of administration. A study of University of California inventions over two decades (1975-1995) showed that only 1 in 400 inventions could be expected to bring in over \$1 million in licensing revenue over its entire life. In addition, according to a recent national Association of University Technology Managers (AUTM) survey, universities, on average, produce one commercially significant invention for every \$2.5 million of research funding. An unusual exception to this rule are the Cohen Boyer patents.

²⁰² Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.16.

²⁰³ *Id.* at 15-16.

²⁰⁴ *Id*. at 53.

 $^{^{205}}$ *Id*.

²⁰⁶ *Id.* at 43 (citing "Considerations in Developing an Intellectual Property Model for Research Grants Awarded by the California Institute for Regenerative Medicine," University of California, The Burnham Institute, Stanford University, and University of Southern California (2004) p.3).

²⁰⁷ Id. (citing AUTM Licensing Survey: FY 2002, Ed. Ashley J. Stevens (Association of University Technology Managers, 2003).

Stanford researcher Stanley Cohen and UC San Francisco researcher Herbert Boyer invented the fundamental technology used widely to catalyze research and commercialization in the exciting new field of DNA cloning. Stanford University, which managed the three basic DNA cloning patents on behalf of the two universities, granted a total of 478 non-exclusive licenses. The licenses' non-exclusivity and reasonable pricing discouraged circumvention of patent rights and spurred further research, development and innovation in the research field. Royalties on the patents exceeded \$255 million, which has been used to support research and education at both universities. This example, however, is a highly unusual amount of royalty returns.

The report stated the following findings as to research and development as they relate to return on investment:

- Those who invest in R&D can expect that a substantial fraction of the social return to their investment will not accrue personally to them.
- There are substantial spillovers between scientific research and innovation, as well as substantial lags.
- The principal benefits of R&D have long been understood to be long-term and to manifest in a variety of ways, few of which benefit the originators of the research directly financially.
- In considering a set of IP policies, it is important to understand that the reward system that motivates researchers depends in large part upon their ability to share some or all of their research, in order to obtain recognition.
- In any scenario other than the extremely rare "blockbuster" invention, and
 regardless of the state's IP policies, state-funded innovations and the revenues
 generated from them cannot realistically be expected to have any significant
 direct effect on the state's revenues.

²⁰⁸ *Id*. at p. 42.

²⁰⁹ *Id*.

²¹⁰ *Id*.

²¹¹ Id.

The desire for substantial financial return to the state in the form of royalties should be balanced with the need to create incentives for the much greater commercial investment that is necessary to develop and commercialize useful products.

Bayh-Dole policies require that grantee's net licensing revenue be used only for research and education.²¹²

3.3 Intellectual Property Objectives

Through grants, the state's ultimate mission is to encourage and enable researchers to discover and develop new knowledge that will ultimately find its way into new products that benefit the public. The primary objectives of the state's IP policies should support this mission, such as in the following examples:

- Support the open dissemination of research results and transfer of knowledge, where appropriate. Universities should preserve the rights of their researchers to freely publish their research results.
- Ensure that discoveries and research tools that are useful for further research are
 made broadly available to the research community. Accessibility of research
 tools ranging from cell lines to reagents to software programs is essential for the
 advancement of research.
- To the extent possible, preserve the ability for grantees to leverage non-state funds in their related research. Ideally, the state's IP policies would not conflict with the obligations associated with other sources of research funds, including federal grants.
- Encourage practical application of state-funded research results for the broad public benefit. This goal requires industry involvement to commercialize research.
- Accelerate the transition of discoveries from research to commercially available
 products, preventive measures, diagnostics, and treatments. The state's IP policies
 should not slow down, inhibit, or prevent this transfer process.

58

²¹² Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.35.

- To the extent possible, balance existing investments with state investments such that each receives appropriate return.
- Promote collaboration between commercial entities and nonprofit research institutions. Collaboration with California-based companies is to be encouraged to help achieve some level of economic return to the state. The location of the firm, however, should not be the major criterion.
- Encourage private investors to invest in further research and development of new technologies resulting from state-funded research. Venture capital investment plays a critical role in the development of IP after initial research and before latestage R&D which is more generally funded by private industry.
- Minimize costs of administering policies. To minimize costs and administrative burden, the state should strive for a uniform and streamlined process for administering its grants and resulting IP.
- Be mindful of the time delay and private investment needed before significant benefits accrue to the state.²¹³

3.4 Recommendations

In formulating their recommendations, the study group agreed that four key principles should guide a California state intellectual property policy. First, the policy should be consistent with the Federal Bayh-Dole Act. Second, the policy should create incentives for commerce in California from state-funded research to the greatest extent possible. Third, the policy should encourage timely publication of results to diffuse knowledge widely, and provides guidance on the kinds of data that are desired to be placed in the public domain or available under open source, Creative Commons, or other broad-use licenses, including software and special databases. Finally, it should require diligent commercialization of IP-protected technology into products that benefit the public.²¹⁴

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²¹³ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.45.

²¹⁴ *Id.* at 51.

Based on these guiding principles, the study group made the following recommendations:

- Permit grantees to own IP rights from state-funded research. This is purposefully
 consistent with Bayh-Dole, so that state and federal funds can be managed in a
 common way. March-in rights are also recommended.
- Where appropriate, require that grantees (institutions, individuals, or both)
 provide a plan describing how IP will be managed for the advancement of science
 and benefit to California. Licensing and development should be in California
 where possible; however the recommendation recognizes that this is not always
 possible or practical.
- Grant basic research funds without requiring that grantees commit to providing a revenue stream to the state. If, however, a revenue stream develops over time, require that revenues be reinvested in research and education. Except in cases where the revenue stream is large, the state should not seek revenue from research funds; this could potentially decrease long-term benefits to the state and such revenues are likely to be miniscule when compared to the state's research budget.
- Generally, make state-developed research tools widely available to other researchers. When licensing state-funded inventions, the freedoms to publish and share state-funded research tools with future projects and other inventors should be preserved.
- Require diligent efforts to develop state-funded IP into applications and products
 that benefit the public. Initial invention reports should be required, and the state
 should retain a reversionary right in cases where the grantee chooses not to move
 forward with commercial development.
- Retain within the state Bayh-Dole-like "march-in" rights if the owner of IP is not
 undertaking appropriate steps to transfer or use the technology to benefit the
 public. The federal government requires regular check-ins and reserves the right
 to step in if it is clear that effective steps are not being taken to develop the
 funded technology; the state should require the same. To date, the federal
 government has not exercised this right.

- Leave license particulars to the owner who is in the best position to judge how best to ensure that discoveries are made widely available through commercialization or otherwise. The state should avoid overly prescriptive licensing policies, and leave flexibility to the grantees who best understand the technology and appropriate licensing terms.
- Reserve the right to use IP by or on behalf of the state for research or noncommercial purposes. Consistent with federal policies, intellectual property funded by a state agency should be made available to other state agencies.
- Establish and maintain state-administered functions to track all IP generated through state funding. A database of state-funded intellectual property should be created to track state-funded research for further research and accounting purposes.²¹⁵

In August 2005, the California Council on Science and Technology prepared an interim report outlining recommendations for a state intellectual property policy to govern the state grants for stem cell research; these recommendations are identical to those listed above. To date, a resulting intellectual property policy has not yet been instituted.

4 New York State Intellectual Property Policies

This section summarizes current intellectual property (IP) policies and practices in New York State (NYS), focusing primarily on i) the public university systems within NYS, ii) specialized funding agencies, including NYSTAR and NYSERDA, iii) selected technology transfer organizations affiliated with NYS agencies, such as the Department of Health, and iv) activities of the NYS Assembly.

The research findings presented herein are based on publicly available information and other details disclosed through limited interviews with staff during the course of this research project. There is no representation that this information is fully comprehensive of all IP-related policies, practices, and issues within New York State.

61

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²¹⁵ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.52-54.

²¹⁶ "CCST Releases Interim IP report for stem cell Institute", http://www.ccst.us/newsletter/2005/2005oct1.php.

4.1 University IP Policies

4.1.1 SUNY and the Research Foundation

The State University of New York (SUNY), established in 1948 under NY EDUC § 352, consists of 34 state-operated and statutory campuses and 30 community colleges. The New York State Board of Regents is the governing body of the University of the State of New York, which includes the SUNY system.

The Research Foundation (RF) is a private, nonprofit educational corporation that administers externally funded contracts and grants for and on behalf of SUNY. Since its establishment in 1951, the Research Foundation has facilitated research, education, and public service for SUNY.²¹⁷ For the purposes of this report, we will focus on the policies and practices related to the Sponsored Programs Administration and Technology Transfer functions of the RF.

The RF includes five Technology Transfer Offices (TTOs), including (1) the central office in Albany; (2) University at Albany; (3) Binghamton University; (4) University at Buffalo; and (5) Stony Brook University. The TTOs identify and protect SUNY intellectual capital, managed sponsored research programs, help faculty market their inventions, and create partnerships with industry to further research and commercialize SUNY-developed technologies.

In FY 2005-2006, the volume of research and other sponsored programs funded through the RF was \$725 million. Including the Statutory Colleges at Cornell and Alfred, the entire university system combined funding for FY 2005-2006 was \$888 million. The funding supports more than 10,400 sponsored projects on State University campuses and 18,000 full- and part-time jobs in New York State. 218

The U.S. government provides more than half of the research funds for SUNY, with other funds coming from business and industry, philanthropic organizations, state agencies and foreign sources.

In FY 2006 the RF was awarded 33 U.S. patents. Technology transfer staff executed 45 new licensing and option agreements, received 284 invention disclosures,

²¹⁷ See https://portal.rfsunv.org/portal/page?_pageid=1307,1624356&_dad=portal&_schema=PORTAL

²¹⁸ *Id*.

and filed 196 patent applications. In FY 2006 SUNY inventions generated \$10.8 million in royalties²¹⁹

The RF has numerous policies in place that relate to Intellectual Property. Highlights of relevant policies follow:

IP Protection Policy

The RF has adopted a policy for protecting intellectual property owned by the RF.220 The policy provides that the RF may, on its own behalf, on behalf of the State University of New York, or in conjunction with a licensee, bring or be a party to an infringement lawsuit to "protect Foundation of SUNY intellectual property rights against infringement or defend against charges of infringement by a third party." Infringement of IP rights occurs when "intellectual property protected by a patent, copyright, or trademark is used or sold without permission of the patent, copyright, or trademark holder." In terms of process, "the Research Foundation Office of General Counsel and Secretary must be notified immediately of all actual or potential infringement lawsuits," and the RF Office of General Counsel and Secretary will determine the course of action in consultation with appropriate operating location officials.

Patent and Invention Policy

The purpose of the Patent and Invention Policy is to outline "appropriate steps to be taken to ensure that the public receives the benefit of all inventions made by persons working in State University facilities."

In general, all inventions made by SUNY faculty members, employees, students, and others utilizing SUNY facilities belong to SUNY.²²³ Inventors must disclose inventions to the state university and apply for patents to the inventions as directed by the

²¹⁹ *Id.*²²⁰ *Id.*²²¹ *Id.*²²² *Id.*²²³ Section 335.28 (b)

university.²²⁴ Patents are to be assigned to the university or to another entity as directed by the university.²²⁵ However, non-university organizations and individuals retain ownership of patentable inventions made with the use of SUNY facilities.²²⁶ Moreover, inventions made by individuals "on their own time" without the use of SUNY facilities are owned by such individuals "even though [the invention] falls within the field of competence relating to the individual's university position."²²⁷ Even inventors who do not retain ownership are entitled to 40% of the "gross royalty paid" for the licensing of their inventions "unless this exceeds limits fixed by applicable regulations of the relevant sponsoring agency."²²⁸

An individual's "own time" is defined as "time other than that devoted to normal and assigned functions in teaching, university service, direction and conduct of research on university premises and utilizing university facilities." The term "university facilities" is defined as "any facility available to the inventor as a direct result of the inventor's affiliation with State University, or any facility available under the trustees' policy on cooperative use of research equipment, or policy on use of facilities by emerging technology enterprises, and which would not otherwise be available to a non-State-University-affiliated individual."

The RF policy favors exclusive licensing provisions as a condition for industry sponsorship of research.²³¹ This policy serves the public and the university in providing industry with the incentive to invest in research and development and transfer work products into the marketplace.²³²

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<sup>224</sup> Id. <sup>225</sup> Id.
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²²⁶ *Id*.

²²⁷ *Id*.

²²⁸ Section 335.28(c).

²²⁹ *Id*.

²³⁰ *Id*.

²³¹ Section 335.28 (1)(III).

²³² Section 335.28 (1)

Computer Software Policy

The Computer Software Policy "requires State University of New York and The Research Foundation of the State University of New York employees to notify their campuses of software they develop and establishes rules for disbursing any revenues resulting from the creation of covered software."

With regard to ownership of computer software, "Title to computer software and software support materials developed by faculty, employees, and students of the State University of New York or employees of the Research Foundation shall belong solely to the State University of New York or the Research Foundation unless all of the following conditions exist, then it belongs to the creator: 1) the work was not created within the scope of employment of the creator; 2) the work created was not the result of a work-for-hire situation; 3) the work created was not a byproduct of sponsor funded or contracted activity; and 4) the work was not developed through the use of facilities, funds or personnel of the University or the Research Foundation or under the control of the University or the Research Foundation."

Equity Participation Guidelines

As background for the equity participation guidelines, the RF provides the following information. "Historically, technology transfer is accomplished through the granting of a license to an established company. These licenses contain royalty terms such as up-front payments, minimum payments, running royalties based on a percentage of net sales, and termination payments. These royalty terms are the preferred method of payment. However, it is recognized that with some companies an equity position in lieu of, or in some combination with, royalty may be appropriate in exchange for a license to the technology. This arrangement would benefit companies by not impacting early stage cash flow and would benefit the Research Foundation (RF) because available company cash could then be applied to the development of the technology at a critical point in the commercialization process."

The equity participation policy is described as follows: "The Research Foundation of State University of New York (RF) will consider holding an equity position in companies that are specifically created to commercially exploit RF/SUNY owned inventions if the operations manager (OM) and the inventor(s) concur. While the

RF will not participate directly in the management or operation of corporations created to advance SUNY or RF technology, the RF is willing to cooperate in the transfer of technology by and/or through equity participation in such corporations. If a company is owned or controlled by the inventor(s), after the total equity participation is determined the 40% inventor(s) share will be immediately distributed to the inventor(s), limiting the RF's equity holding to only the campus portion. If RF campus funds are used to increase participation in connection with a licensing agreement, the purchase of equity must meet the RF Board of Directors' investment guidelines."

"As a general policy all shares acquired under this equity participation will be immediately divided and the inventor(s) portion will be distributed to the inventor(s) in accordance with the 40:60 split required by the Patent and Inventions Policy of the State University of New York, as adopted by the Research Foundation (Patent Policy). Provided there are compelling business reasons, and with the prior approval of the OM and the RF Treasurer, the RF may receive and hold all issued shares."

Guidelines for Managing License Agreements

"In its fiduciary role, the Research Foundation (RF) has an obligation to ensure that optimal royalties are realized under its license agreements. Licensing arrangements must be monitored and action must be taken promptly if a licensee fails to fully comply with the reporting and royalty payment procedures of an agreement. Consideration should also be given to periodic review of any licensee when royalty revenue exceeds \$1 million per year. A possible course of action to ensure compliance with reporting and royalty payment procedures is an audit of the licensee's records."

As guidance in determining whether to conduct a license agreement audit, a list of ten determining factors is provided:

- Delinquency by licensee in submitting royalty reports as required by license.
- Chronic miscalculation of royalty by licensee.
- Low performance of licensed product compared to other licensee products.
- Inconsistency of sales with market performance in the field.
- Indication of dilution of royalty base because of product combinations.
- Existence of complex distribution channels for licensed product.
- Unexplained difficulties in achieving due diligence milestones.

- Claims by licensee that related new products are outside scope of license.
- Unresponsiveness of licensee to requests for clarification of royalty issues.
- Absence of responsible contact for explaining royalty figures.

Conflict of Interest Policy

The conflict of interest policy provides in part: "No officers or employees of the Research Foundation should have any interest, financial or otherwise, direct or indirect, or engage in any business or transaction or professional activity or incur any obligation of any nature that is in substantial conflict with the proper discharge of their duties in the best interests of the Research Foundation. No officers or employees of the Research Foundation should have any financial interest that will, or may be reasonably expected to, bias the design, conduct, or reporting of sponsored programs."

Standard Sponsorship Agreement

The RF has also provided a standard sponsorship agreement.²³³ Under the agreement, RF holds title to all inventions discovered with the use of RF facilities during work under the sponsorship agreement.²³⁴ The RF may grant a exclusive license to such inventions to the sponsor²³⁵, but the sponsor is required to reimburse the RF "for all direct costs of patenting new technology developed under this Research Agreement" if the sponsor acquires rights in the invention.²³⁶ Inventions made using the sponsor's facilities belong to the sponsor.²³⁷ Inventions made using both the sponsor's and RF's facilities are owned jointly by RF and sponsor.²³⁸

²³³ See https://portal.rfsuny.org/portal/page?_pageid=1158,1606818&_dad=portal&_schema=PORTAL, "Research Agreement" (references to sections are contained in this agreement).

²³⁴ Section 9(a)

²³⁵ Section 9(c)

²³⁶ Section 9(d)

²³⁷ Section 9(f)

²³⁸ Section 9(e)

4.1.2 NYS College of Agriculture and Life Sciences at Cornell University (CALS)

The New York State College of Agricultural and Life Sciences (CALS) is the second largest undergraduate college at Cornell University and the third largest college of its kind in the United States.²³⁹ It has been ranked by national surveys as the best college of agricultural and related sciences in the country.²⁴⁰ CALS has four priority areas in research: the land-grant mission, applied social sciences, environmental sciences, and new life sciences.²⁴¹

During fiscal year 2006, CALS research expenditures totaled \$121,623,350.²⁴² This total represents 20.1% of the total research expenditures of all colleges and endowed units within Cornell University.²⁴³ Of these CALS research expenditures, over \$57 million came from federal funding, \$19 million from non-federal funding, and \$76 million dollars from sponsors.²⁴⁴

Of the \$76 million dollars of sponsor support, slightly more than \$6 million came from state & local governments, roughly \$1.5 million each came from corporations/trade associations and foundations, and close to \$10 million came from non-profit organizations.²⁴⁵ Total non-federal funding was over \$19 million dollars, approximately \$38 million less then total federal funding.²⁴⁶

Of federal sponsors, the Department of Agriculture was the largest supporter, contributing over \$17 million of sponsor funds.²⁴⁷ Second in federal sponsor support was

²⁴⁴ *Id*.

²⁴⁵ *Id*.

²⁴⁶ *Id*.

²⁴⁷ *Id*.

²³⁹ Overview of CALS, at http://www.cals.cornell.edu/cals/about/overview/index.cfm (last visited March 23, 2007).

²⁴⁰ *Id*.

²⁴¹ CALS Research, at http://www.cals.cornell.edu/cals/research/index.cfm (last visited March 23, 2007).

²⁴² Cornell University Research Expenditures: July 1, 2005 - June 30, 2006, at http://www.research.cornell.edu/vpr/ResExp/ResExp2006.pdf (last visited March 23, 2007).

²⁴³ *Id*.

the National Science Foundation, which contributed a little over \$16 million to CALS research programs.²⁴⁸ The Department of Health and Human Services was third in federal sponsor support, contributing approximately \$12.5 million to CALS research.²⁴⁹ The Department of Defense ranked fourth in support amongst federal sponsors, contributing just under \$1 million to CALS research.²⁵⁰

By discipline, research expenditures for agriculture and the biological/life sciences comprised 24.5% of total research expenditures for disciplines at Cornell University. Agricultural research expenditures represented 11.1% of total research expenditures for all disciplines at Cornell, while the biological and life science research comprised 13.3% of total research expenditures. 252

Cornell University has promulgated a patent²⁵³ policy binding on the university, which includes CALS. The patent policy was adopted by the Cornell University Board of Trustees Executive Committee on May 26, 1995. The policy was effective July 1, 1995 and revisions to the patent policy were adopted in December of 2002.²⁵⁴

Under the patent policy, "University Research" is defined as "all research conducted in the course of an inventor's employment with the University (including but not limited to the performance of a grant contract or award made to the University by an extramural agency) or with the use of University Resources." Use of University

²⁴⁸ *Id*.

²⁴⁹ *Id*.

²⁵⁰ *Id*.

²⁵¹ *Id*.

²⁵² Cornell University Research Expenditures: July 1, 2005 - June 30, 2006, at http://www.research.cornell.edu/vpr/ResExp/ResExp2006.pdf (last visited March 23, 2007). Note that the "biological/life sciences" discipline includes basic biological sciences in the colleges of Arts and Sciences, CALS, Veterinary Medicine, and the Division of Nutritional Sciences.

²⁵³ Cornell University Patent Policy, at http://www.policy.cornell.edu/cm_images/uploads/pol/Patent.html (last visited March 23, 2007). Please refer to Appendix B for the complete policy. Unless otherwise indicated, all references to sections are contained in this policy.

²⁵⁴ Cornell University Patent Policy, at http://www.policy.cornell.edu/cm_images/uploads/pol/Patent.html (last visited March 23, 2007).

²⁵⁵Section (B).

"office space or library facilities shall not constitute a use of University resources for this purpose." ²⁵⁶ Inventions resulting from this research must be promptly disclosed in writing to the Cornell Research Foundation. ²⁵⁷

All patentable inventions "conceived or first reduced to practice by faculty and staff of Cornell University in the conduct of University Research shall belong to the University." Patentable inventions made by individuals on their own time and "without the use of University resources shall belong to the individual inventor." If the University has an ownership interest in an invention but does not file a patent application within one year, or "fails to make a positive determination regarding pursuit of a patent within a period of six months from the date of disclosure", all of the University's rights in the invention are reassigned to the inventor upon request and are "subject only to such external sponsor restrictions as may apply." Even if the University retains ownership of the invention, the inventor is entitled to one-third of net royalty income derived from the invention.

The Cornell Research Foundation may, "with due consideration to the prospective licensee and when consistent with law applicable to federally supported research", license an "existing patent or invention on an exclusive basis for a reasonable period up to the full term of the patent", provided the exclusive license "contain provisions to promote the likelihood that the invention provides a public benefit, including but not limited to a requirement of diligence and march-in rights where the licensee does not adequately perform."

²⁵⁶ Section (B), fn. 1.

²⁵⁷ Section (C).

²⁵⁸ Section (D)(1).

²⁵⁹ Section (D)(2).

²⁶⁰ Section (D)(3).

²⁶¹ Section (E)(1).

²⁶² Section (F).

Each participant in University research must execute a patent agreement.²⁶³ The agreement must acknowledge that all research is "subject to the terms of this Patent Policy", and that the participant "shall agree to cooperate with the University or its designee in the assignment to the University of patent rights in inventions or discoveries conceived or first reduced to practice during such research and prosecution of patent applications, as may be required to implement its provision."²⁶⁴

4.1.3 City University of New York (CUNY) and the CUNY Research Foundation

Founded in 1847, The City University of New York (CUNY) consists of 11 senior colleges, 6 community colleges, a doctorate-granting graduate school, a journalism school, a law school and the Sophie Davis School of Biomedical Education²⁶⁵. Much like SUNY, CUNY is assisted by its own Research Foundation²⁶⁶. The CUNY Research Foundation (CRF) assists in the post-award administration of private and government sponsored programs in the City of New York²⁶⁷. Patents and other intellectual property assets owned by the University are assigned to the CRF²⁶⁸.

In 2005, CUNY received \$90,900,868 in funding specifically for research²⁶⁹. Of the total award, 71% came from Federal sources, 5% came from State sources, 4% came from the City of New York, and 20% came from Private sources.²⁷⁰. Thus, the Federal

²⁶³ Section (J).

²⁶⁴ *Id*.

²⁶⁵ CUNY, http://en.wikipedia.org/wiki/CUNY (last visited March 28, 2007).

²⁶⁶ Missions Statement, http://www.rfcuny.org/AboutRFWeb/aboutrf.html (last visited March 23, 2007).

²⁶⁷ *Id*.

²⁶⁸ The City University of New York Intellectual Property Policy, http://portalsearch.cuny.edu/cms/id/cuny/documents/informationpage/000649.htm (last visited March 23, 2007).

²⁶⁹ Research Foundation of the City University of New York Annual Report 2005, http://www.rfcuny.org/AnnualReports/2005/RFAR06.pdf (last visited March 28, 2007).

²⁷⁰ Id.

Government provides most of the funding for research, with only approximately \$4 million coming from the State²⁷¹.

CUNY IP Policy

IP in the CUNY system is handled by a combination of the CRF, the Chancellor, and the Research property committee. Like many university systems, CUNY has an IP policy²⁷². Salient points include:

- Creator retains copyrights, while all other intellectual property is claimed by the University, including Patent, Trade Secrets, and Trademarks²⁷³.
- Policy applies to all property made by "members of the university" making "substantial use" of university resources as a direct result of university duties pursuant to the terms of an agreement OR in the course of or related to grants, contracts, or activities administered by the Research Foundation.²⁷⁴
- Determination of who owns Intellectual property in a given situation is vested in the Chancellor of CUNY.²⁷⁵
- Creator has the right to request a release of IP should the University decide not to
 protect or commercialize it, or if 90 days have elapsed following disclosure
 without any response from the University.²⁷⁶
- University may condition release of IP on up to 10% grant of royalty rights to the University.²⁷⁷
- University retains a royalty-free, non exclusive license to IP for internal educational purposes. ²⁷⁸

²⁷¹ *Id*.

²⁷² The City University of New York Intellectual Property Policy, http://portalsearch.cuny.edu/cms/id/cuny/documents/informationpage/000649.htm (last visited March 23, 2007).

²⁷³ *Id*.

²⁷⁴ *Id*.

²⁷⁵ *Id*.

²⁷⁶ *Id*.

²⁷⁷ Id.

- IP committee will includes president of CRF, Executive vice chancellor for academic affairs, with the Chair of the University faculty senate appointing further members. ²⁷⁹
- Contains two subcommittees: one for copyrightable works, the other for patent and trade secret disclosure.²⁸⁰
 CRF to monitor and insure compliance by universities with Bayh-Dole.²⁸¹
- Income from IP goes first to reimburse the CRF for out of pocket expenses. 282
- Income from IP then distributed 50% to creator, 25% to creator's college, then 35% to University to support research and to defray IP protection costs to University.²⁸³

Last examined and approved by Board of Trustees on November 18, 2002.²⁸⁴

4.2 Specialized Funding Agency IP Policies

²⁸⁵ About NYSTAR, NYSTAR, http://www.nystar.state.ny.us/about.htm.

4.2.1 NYSTAR

The New York State Office of Science, Technology and Academic Research (NYSTAR) was initially created as part of the Jobs 2000 for New York State legislation, which was enacted to significantly increase state support for high-technology academic research and the state's capital investment in high-tech business growth. In the 2005-2006 state budget cycle NYSTAR became a public benefit office of NYS and was renamed the New York State Foundation for Science, Technology and Innovation.

²⁷⁸ Id.
279 Id.
280 Id.
281 Id.
282 Id.
283 Id.
284 Id.

NYSTAR "supports technology development, innovation and commercialization leading to economic growth in New York State." The organization's key goals are to (1) encourage economic growth within New York State; (2) to increase the allocation of Federal research money within the state; (3) to organize and make available New York's science and technology informational resources; and (4) to develop and recommend policies to New York's Governor and State Legislature that will allow the state to maximize the economic potential of its science, technology, and academic research assets.²⁸⁷

NYSTAR funding initiatives include:

Center for Advanced Technology (CAT) Programs: There are 15 CATs in New York State. The CAT Program has supported university-industry collaboration in research, education and technology transfer, with a strong focus on helping New York businesses gain a competitive technological edge. ²⁸⁸

Faculty Development Program: The NYSTAR Faculty Development Program assists institutions of higher education in New York State in the recruitment and retention of leading entrepreneurial research faculty in science and technology fields with strong commercial potential. ²⁸⁹

Technology Transfer Incentive Program: The Technology Transfer Incentive Program is specifically designed to help business make the rapid transfer of new ideas and new technology from the research lab to the marketplace. ²⁹⁰

Matching Grants Leverage Program: The State Budget provides \$5 million for matching grants to leverage resources from Federal or private sources.²⁹¹

James D. Watson Investigator Program: Provides grants to outstanding early career scientists who demonstrate the potential for leadership at the frontiers of

²⁸⁶ Goals. NYSTAR, http://www.nystar.state.ny.us/goals.htm.

^{287 7.3}

²⁸⁸ CAT Programs, NYSTAR, http://www.nystar.state.ny.us/cats.htm.

²⁸⁹ Faculty Development Program, NYSTAR, http://www.nystar.state.ny.us/fdp.htm

²⁹⁰ TTIP, NYSTAR, http://www.nystar.state.ny.us/ttip.htm

²⁹¹ Matching Grants, NYSTAR, http://www.nystar.state.ny.us/mglp.htm

knowledge in the life sciences and demonstrate an entrepreneurial spirit to help foster economic development in New York State. ²⁹²

College Applied Research & Technology Center Program: Encourages greater collaboration between private industry and colleges toward development and application of new technologies. ²⁹³

Science and Technology Law Center: The Law Center conducts research on issues relating to the work being performed at research centers to increase awareness and understanding of such issues as the protection and commercialization of intellectual property, technology transfer practices, patents, copyright and trademark law, and licensing agreements. In addition, the Law Center will make relevant information available to startup and early stage technology companies outside of university settings.²⁹⁴

Strategic Initiative Program: The Strategic Initiative Program includes projects that are deemed important to New York State to continue to foster the long-term growth of New York State's high technology economy. ²⁹⁵

According to its website, NYSTAR's current investments total approximately \$242.5 million, one-third of which is for applied research through academic R&D centers. Annual funding of science and technology research is estimated at \$40-\$50 million, which often includes multi-year awards.

NYSTAR includes the following language regarding Intellectual Property in its sample contracts for the CAT Program:

"INTELLECTUAL PROPERTY. In situations involving intellectual property the decisions about its disposition arising from the Project shall, to the maximum extent possible, promote the exploitation of such

75

²⁹² Watson Investigator Program, NYSTAR, http://www.nystar.state.ny.us/jdw.htm

²⁹³ CART Program, NYSTAR, http://www.nystar.state.ny.us/cart.htm

²⁹⁴ STLC, NYSTAR, http://www.nystar.state.ny.us/stlc.htm

²⁹⁵ Strategic Initiative Program, NYSTAR, http://www.nystar.state.ny.us/sip.htm

²⁹⁶ Discovery Drives Progress, NYSTAR, http://www.nystar.state.ny.us/Assets/pdfs/brochure07.pdf

²⁹⁷ Interview with John Demarest and Jason Dohling, Staff Members of NYSTAR, (Mar. 9, 2007).

intellectual property in ways that will contribute to the creation or growth of New York companies and economic development in the State and be in keeping with any Intellectual Property Policy developed by NYSTAR." ²⁹⁸

According to information provided by staff members during an interview conducted for this report, the above referenced contract language reflects the general IP policy of NYSTAR. ²⁹⁹

In addition, in its Capital Facility contracts as part of the STAR program, NYSTAR includes terms and conditions that are summarized below.

Contractor may retain the IP rights in inventions and copyrightable works; however, "NYSTAR shall have a non-exclusive, non-transferable, irrevocable, paid up license for itself, the State of New York, its agencies, departments, boards and commissions and any public benefit corporation and public authority.... to practice or have practiced for or on behalf of New York State for internal, non-commercial purposes" the inventions and copyrightable works.

Contractor must disclose inventions to NYSTAR and notify NYSTAR in writing whether or not they will elect to retain title to inventions.

Filing of patent applications and registration of copyrightable works will be at the sole discretion of Contractor.

Upon written request, Contractor will convey title to NYSTAR if Contractor i) elects not to retain title of an invention or copyrightable work; ii) elects not to file patent applications in certain countries within a stated time period; iii) decides not to continue prosecution of a patent application or pay maintenance fees on a granted patent. In such instance Contractor will retain a non-exclusive, royalty-free license to the invention or copyrightable work.

Contractor must take "effective steps to achieve Practical Application" of the intellectual property within a reasonable time, and Contractor agrees "to pursue as a

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²⁹⁸ Sample Contract, NYSTAR, http://www.nystar.state.ny.us/cats/sample.doc

²⁹⁹ Interview with John Demarest and Jason Dohling, Staff Members of NYSTAR, (Mar. 9, 2007).

priority, and focus its best efforts towards, furthering economic development in New York State."

Citing the intention of NYSTAR to promote reinvestment, Contractor must agree to use the balance of royalties or income from Intellectual Property earned after payment of expenses to support scientific research and education, with substantial consideration given to supporting the STAR Center.

4.2.2 NYSERDA

The New York State Energy Research and Development Authority (NYSERDA) is a public benefit corporation created in 1975 by the New York State Legislature under article 8, Title 9 of the State Public Authorities Law. NYSERDA's mission is to use innovation and technology to solve some of New York's most difficult energy and environmental problems in ways that improve New York State's economy. 300

NYSERDA's programs are designed to help New York meet its energy needs, create jobs, and help consumers save money. For the purposes of this report, we will focus on the Research, Development and Demonstration (RD&D) program, which is part of NYSERDA's broader Economic Development Program.

NYSERDA's RD&D program supports the development and commercialization of energy and environmental products, technologies, and processes that improve the quality of life for New Yorkers and help businesses in the State compete and grow in the global economy. Activities are organized in six primary program areas: (1) Industry; (2) Buildings; (3) Transportation and Power Systems; (4) Energy Resources; (5) Renewable Portfolio Standard; and (6) Environmental Research.

NYSERDA derives the majority of its revenues from the System Benefits Charge (SBC) – an assessment on the intrastate sales of New York State's investor-owned electric and gas utilities. NYSERDA's total revenues for FY ending March 31, 2006 were \$224,976,053, of which \$144,396,033 came from the SBC. State Appropriations for the same fiscal period totaled \$26,798,845.

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77

³⁰⁰ NYSERDA footnote

For the purposes of this report, we will focus on NYSERDA's funding of RD&D projects. NYSERDA's Strategic Plan for 2006-2007 indicates that total RD&D funding will be \$77,840,000. Of this amount, \$12,600,000 is "statutory funding" which is potentially subject to NYSERDA's recoupment policy, as described in further detail in the next section.

NYSERDA has a "Recoupment Policy" for new product development projects within the RD&D program requesting NYSERDA funding over \$50,000. The Recoupment Policy applies only to RD&D projects involving product development that receive statutory funding, and not those projects funded by Systems Benefits Charges or through the Renewable Portfolio Standard program.

The Recoupment Policy language included in NYSERDA Program Opportunity Notices (PONs) follows:

"For any new product development projects requesting NYSERDA funding over \$50,000, NYSERDA will require a royalty based on sales of the new product developed. NYSERDA's standard royalty terms are 1.5% of sales for products produced in New York State (for a period of 15 years or until the contractor pays NYSERDA an amount equal to the amount of funds paid by NYSERDA to the contractor, whichever comes first) and 5% of sales for products produced outside of New York State (for a period of 15 years or until the contractor pays NYSERDA an amount equal to three times the amount of funds paid by NYSERDA to the Contractor, whichever comes first)." [insert footnote to PONS]

For the FY ending March 31, 2006, \$1,137,973 was recouped as "project repayments." [FN] Approximately \$795,910 of this amount was owed during that fiscal year; the remaining project repayments were back-collected for repayments owed in previous years.

NYSERDA's RD&D Recoupment Policy also indicates that contracts should include "march-in rights" allowing NYSERDA to grants rights to the technology or the right to commercialize to another organization other than the contractor if the technology is not marketed or developed by the contractor in a reasonable minimum period of time.

[add FN] The full text of NYSERDA's Recoupment Policy is included in Appendix B.2.

NYSERDA's PON Proposal Evaluation criteria indicate that all proposals will be reviewed by a Technical Evaluation Panel (TEP) and will be scored and ranked according to the following criteria, listed in order of importance: Does the proposal:

- 1. Address transportation and energy-related challenges in New York State?
- 2. Emphasize development of marketable products rather than basic research?
- 3. Provide direct and quantifiable energy, environmental, and economic benefits in New York State?
- 4. If applicable, show consistency with regional transportation plans and State or Federal regulations?
- 5. Include a Commercialization Plan?
- 6. Provide cost-sharing?

4.3 Technology Transfer Offices Affiliated with New York State Agencies

4.3.1 NYS Department of Health/HRI

Health Research, Inc. (HRI) is a not-for-profit corporation affiliated with the New York State Department of Health (DOH) and the Roswell Park Cancer Institute (RPCI). HRI's mission is to assist DOH and RPCI to effectively evaluate, solicit, and administer external financial support for DOH and RPCI projects, and to disseminate the benefits of DOH expertise through programs such as technology transfer.

Funding for HRI/DOH/RCPI projects come from a variety of sources, with most of HRI's funding coming from federal and private sponsors. DOH and RCPI scientists may receive state funding or some form of state support, although no specific figures were available.

All matters related to patent administration and technology are coordinated by HRI. DOH assigns all patent and technology rights to HRI for the purpose of facilitating technology transfer and administering the distribution of income to inventors. If DOH/HRI decide to patent an invention, HRI will coordinate all matters relating to patent prosecution, and subsequently licensing or other utilization of the patent. Such arrangements may include the use of a patent management firm, or other external resources. DOH/HRI may, at its option, return the patent rights to an inventor/employee if DOH/HRI does not wish to commercially exploit a patent/invention.

With respect to ownership of inventions, "All employees, upon employment with the Department, waive their rights to any patent which may be developed as part of their job." More specifically, the patent and technology transfer policy states as follows: "All inventions and technology developed by persons utilizing Department of Health (DOH) facilities, or by employees during the course of their employment, are the property of DOH. The inventor, when so instructed by DOH officials, shall make application for patent(s). The resulting patent(s) shall be in DOH's name. Additionally, DOH shall have rights to all inventions developed in the course of projects under contract to DOH/HRI, unless a specific waiver is granted by the Commissioner of Health. A patentable invention or technology that is developed wholly without the use of DOH/HRI facilities or other resources, and wholly on an individual's own time, shall not be deemed to be made in the course of a program or project of DOH/HRI, and DOH/HRI asserts no claim to the technology or to any resulting patent(s)."

The patent and technology transfer policy further states that DOH will pursue patents on inventions if the following objectives can be achieved: i) the broadest and most rapid dissemination of the benefits of such inventions can be made to the public; ii) mutually beneficial collaboration between DOH/HRI and the private sector is reasonably expected to occur; iii) the rights of the State, the Department, HRI, and the inventor are appropriately protected.

When an invention is successfully licensed by HRI, 50% of the net royalty goes directly to the inventor(s). The remaining 50% will be shared according to a technology sales agreement between the parties, which is intended to reflect an appropriate apportionment between HRI and DOH. Both entities reinvest funds in research, education and training.

4.4 NYS Assembly - IP Policy Activities

4.4.1 Assembly Bill 3017

On January 22, 2007, Assembly Bill 3017 (A.3017), was introduced in the 2007-2008 session by Assemblymembers Morelle, Magnarelli and Destito and referred to the Committee of Economic Development, Job Creation, Commerce and Industry. A.3017 is

described as "An Act to amend the public authorities law, in relation to creating the intellectual property asset management advisory council." 301

Background for A.3017 is provided as follows: "State-funded research grants represent an investment of public resources and therefore the State needs to manage its rights to intellectual property derived from these investments so that the intellectual property is best utilized for the benefit of the State and its taxpayers, as well as the private sector. The intellectual property rights acquired by the State as a result of State-funded research represent a great opportunity to return social and economic value to New York citizens. The dissemination, application, and utilization of the intellectual property can play a significant role in the development of new consumer and industrial products and in the enhancement of the productivity and competitiveness of businesses involved in the production of existing products. This bill would establish an advisory council to develop recommendations to the Governor and the Legislature on how to organize and manage the cataloging, marketing, licensing, and legal protection of all intellectual property rights of the State." ³⁰²

Key components of A.3017 are summarized as follows:

- The creation of an eleven-member Intellectual Property Asset Management
 Advisory Council ("Advisory Council") to, within a two-year period, develop
 recommendations on how the State should treat State-owned intellectual property
 created under state contracts, grants and agreements.
- The Advisory Council's recommendations, which would be made to the Board of the NYS Foundation for Science, Technology and Innovation (the "Board"), shall include (A) whether all, none, or some of the rights arising out of the creation of intellectual property should be dedicated to the public domain; (B) how the state should maximize the protection of intellectual property that it owns; (C) how state employees and officials should be made aware of the obligations, restrictions, requirements and opportunities regarding the protection and management of state-owned intellectual property; (D) how state employees and officials should be informed on disclosure and whether a uniform system of disclosure should be

81

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³⁰¹ Bill Summary – A03017, NEW YORK STATE ASSEMBLY; See http://assembly.state.ny.us/leg/?bn=A03017
³⁰² Id.

developed and implemented; (E) what actions are being taken by state agencies, authorities, departments, boards, and commissions to manage state-owned intellectual property; (F) how ownership rights should be determined when intellectual property is created by state employees in the course of their state employment.

• Based on the recommendations of the Advisory Council, the Board shall submit a report to the Governor, the Speaker of the Assembly, and the temporary President of the Senate providing guidance on how to: (A) promote the utilization of intellectual property arising from State-supported contracts, grants and agreements; (B) encourage maximum participation of small-business firms in licensing state-owned intellectual property; (C) promote collaboration between commercial concerns and state entities in commercializing State-owned intellectual property; and (D) ensure that there are mechanisms in place that allow the State to obtain certain minimal rights in State-supported intellectual property to meet the needs of the State and protect the public against nonuse or unreasonable use of such intellectual property.

4.4.2 Assembly IP Policy Roundtable Meetings

Two Assembly roundtables on the topic of IP Policy in NYS were hosted in recent months. The first, held on September 20, 2006 in Canandaigua, NY, was sponsored by the NYS Assembly Task Force on University-Industry Cooperation, chaired by Assemblymember William B. Magnarelli, and the Assembly Subcommittee on Manufacturing, chaired by Assemblymember Joseph D. Morelle. The second, held on January 17, 2007 in Albany, NY was sponsored again by Assemblymembers Magnarelli and Morelle and their respective committees, in conjunction with the Assembly Standing Committee on Small Business chaired by Mark Weprin.

Issues discussed during the roundtable meetings included:

- What is the benefit to the taxpayers of NYS for the investments made by the State in research and development (R&D)?
- Whether and how State IP should be tracked and catalogued and what role the State should play in "managing" IP.

- The need for any NYS IP policy to be in alignment, and not conflicting with, federal policies as set forth in the Bayh-Dole Act.
- A desire for IP policy to create incentives, not disincentives, for technology research and commercialization within the State.
- Care should be taken to avoid making the technology transfer process more costly and cumbersome than it currently is.

Further details on the NYS IP Policy Assembly roundtables can be found on the NYS Assembly website. 303

5 Overview of State Intellectual Property Policies

5.1 University IP Policies

Many states do not have statewide intellectual property policies. However, a few states, such as Alaska, have embraced a comprehensive intellectual property policy that focuses on strengthening the ties between corporate and university research by encouraging spin-off and start up companies. In Arizona, for example, the legislature enacted a statute which allows employees of a state institution to establish and maintain an interest in a private company which supplies equipment, material, or services to an institution. This type of legislation is used to facilitate the transfer of technology developed by a university student or employee.

Aside from comprehensive state intellectual property policies, many states have intellectual property policies that apply to their state university system. These policies mainly focus on compliance with federal regulations and outlining the rights and responsibilities of university researchers. These policies tend to focus on compliance with federal regulations, protecting the rights of students and faculty who conduct research within the university system, securing intellectual property rights, and outlining regulations dealing with misconduct and conflicts of interest. The policies also tend to have provisions that discuss royalty distribution and assignment of intellectual property rights.

³⁰³ See NYS Assembly; http://assembly.state.ny.us/mem/?sh=postings&ad=120

A majority of the states leave crafting intellectual property policies to their state universities. These policies usually focus on inventor's rights, revenue distribution, and when the university may receive equity.

Almost every university policy requires employees or students to disclose intellectual property they have developed. If the intellectual property was developed according to certain guidelines, then the university will retain ownership rights. Usually those guidelines require the technology to be created by university employees during the course of research conducted while performing university duties and with use of university resources. Furthermore, the universities are usually given the power to grant the intellectual property to research foundations for further development or act as licensors to convey the intellectual property rights to commercial ventures. Many state universities allow the inventor the opportunity to prove that the technology was developed personally and outside the scope of the inventor's employment at the university.

The distribution of revenues differentiates between states in terms of actual percentages. However, there is a trend of splitting the revenues into certain stages. Usually in the lower stages the inventor and the university will get a majority of the revenue distribution. As more revenue is generated from the technology, the inventor receives a lower percentage with more of the distribution flowing to the university and to the department of the university to which the inventor belongs.

Most state universities seem to retain a right to a royalty free license for internal use of the intellectual property for research and educational purposes. These may also include a right to publish or present the intellectual property following review by any sponsor for proprietary and trade secret information.

Many universities also may receive equity in compensation for their conveyance of rights in business entities. This can come in the form of stock, securities, options, or other non-cash consideration. Furthermore, inventors may serve as members of the board of directors of a business that has an agreement with the university relating to the commercialization of that specific intellectual property. However, many universities require review and approval from the universities' administration prior to allowing the inventor to serve on the board.

5.2 Specialized Funding Agency IP Policies

A significant number of states have specialized boards, councils, commissions, or research centers that are tasked with encouraging technology commercialization. Many of thee boards have several purposes that include securing funds and determining the intellectual property rights that will be bestowed upon the funding recipient. These agencies also make strategic assessments on the current state of intellectual property, determine future industries to focus on, provide recommendations about where research time should be spent, and determine which monetary investments would create jobs and business opportunities. Some common industries that the research centers focus on include biotechnology, energy, advanced manufacturing, information technology, petroleum, aerospace, and defense. Research center inventions will often times remain the property of the center/foundation. Today, biotechnology appears to be the leading field among the specialized research centers and boards.

A small number of states may have a director, working under the governor, who oversees a research fund and disposes of intellectual property as he/she deems most favorable. Some states use an industry cluster model, where offices, funded by the government, conduct research in varying fields. For inventors who are not part of state education institutions, inventions created within the scope of employment or when using resources of the state, belong to the state

6 Summary of State Intellectual Property Policies

6.1 Alabama

6.1.1 University IP Policies

The University of Alabama System ("UA") includes three doctoral universities, the University of Alabama, located in Tuscaloosa, the University of Alabama at Birmingham, and the University of Alabama in Huntsville. The UA has developed policies to comply with federal funding requirements, and outlines the responsibilities and rights of researchers. Auburn University, a private research institution, and home to

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³⁰⁴ The University of Alabama System, http://www.uasystem.ua.edu/.

the Alabama Technology Transfer Center, has its own policies regarding research, similar but somewhat more comprehensive than the UA. 305

The UA has a policy governing data ownership and retention resulting from sponsored research, in compliance with federal regulations. UA retains rights to all sponsored research discoveries and data, but does allow for the Principal Investigator ("PI") to retain copies of the research records and materials he or she creates in support of academic freedom. In regard to government sponsored research, UA requires that data be kept for a minimum of three years after the close-out documents have been delivered to the government. As a consideration for the assignment of rights to UA, inventors are entitled to receive 50% of the royalties, fees, and other financial return from the invention, less 15% for overhead costs, and a deduction for the costs of obtaining and maintaining patent protection.

Auburn University differentiates in the handling of federal and state sponsored research.³¹⁰ Federally sponsored research is subject to federal regulations and individual contractual terms in regard to ownership of the resulting intellectual property, while state sponsored research is treated identically to internally funded research.³¹¹

6.1.2 Specialized Funding Agency IP Policies

The Alabama Technology Network ("ATN"), a division of the Auburn Technical Assistance Center, is an organization that links two-year colleges, the University of

³⁰⁵ Alabama Technology Transfer Center, http://www.alabamat2.org/.

³⁰⁶ The University Of Alabama Policy And Procedures For Research And Other Sponsored Project Data Ownership And Retention, University of Alabama, http://osp.ua.edu/UA%20Data%20Retention%20Policy(final).pdf.

³⁰⁷ *Id*.

³⁰⁸ *Id*.

³⁰⁹ *University of Alabama Patent Policy*, University of Alabama, http://facultysenate.ua.edu/handbook/append-g.html.

³¹⁰ Auburn University Patent Policy, Auburn University, http://ott.auburn.edu/forms/ppolicy.htm.

³¹¹ *Id*.

Alabama System, Auburn University, and the Economic Development Partnership of Alabama to increase the competitiveness of private industry within the state.³¹²

The ATN is Alabama's affiliate of the National Institute of Standards and Technology's Manufacturing Extension Partnership.³¹³ It provides services such as onsite technical consultations, conducting detailed needs assessments, outlining potential solutions, providing technical assistance to solve problems, identifying external service providers as needed, and providing worker training to improve skills and productivity.³¹⁴

6.2 Alaska

6.2.1 University IP Policies

On July 22, 2004, Alaska Statute Section 1. AS 14.40.210 (a) was amended to include a clause allowing the president of the University of Alaska to authorize the creation of jointly owned businesses.

In May 2002, Alaska State Senate Joint Resolution No. 44 (SJR044) requested that representative state and federal organizations jointly develop a Research and Development (R&D) plan to help expand and diversify Alaska's economy, protect the health of Alaskans and the environment of Alaska, and strengthen and maintain the health of state research institutions. A working group comprised of representatives from University of Alaska (UA), the Alaska Science and Technology Foundation (ASTF), the North Pacific Research Board (NPRB), and the US Arctic Research Commission (ARC) developed a comprehensive report on research and development in Alaska.

Citing the economic growth resulting from companies spun off from university research in areas such as Boston's Route 128, California's Silicon Valley, and North Carolina's Research Triangle Park, the report recommended that Alaska forge greater ties

³¹² Alabama Technology Network, http://www.atn.auburn.edu/atn_index.html.

³¹³ *Id*.

³¹⁴ *Id*.

³¹⁵ *Alaska Research: State Research & Development Plan*, http://www.alaska.edu/AlaskaResearch/introSJR44.xml.

³¹⁶ *Id*.

between industry and university research through the promotion of spin-off companies.³¹⁷ As university researcher participation in such spin-offs is prohibited under the Alaska Executive Branch Ethics Act (AS 39.52), the report asked that AS 14.40 be amended to allow for joint ownership of university research, enabling spin-offs.³¹⁸ The measure was passed in 2004.

Ownership and commercialization of research produced by the University of Alaska is governed by the University of Alaska's Regents' Policy. Unless the product of permissible activities outside the university, or in circumstances where the mission of the university is better served by alternative action, inventions are assigned to the University of Alaska. The president of the university is granted significant latitude as to the commercialization of research, including how the resulting revenue is to be used and how invention rights are assigned. 321

6.2.2 Specialized Funding Agency IP Policies

No information discovered.

6.3 Arizona

6.3.1 University IP Policies

In 1986, in order to encourage industry-sponsored research, the Arizona legislature enacted A.R.S. § 15-1635.01 which allows the giving of title or the granting of licenses to the sponsor of the research.³²² The statute also allows an officer or employee of a state institution to establish and maintain a substantial interest in a private entity which supplies equipment, material, supplies or services to the institution in order to

³¹⁷ *Id*.

³¹⁸ *Id*.

³¹⁹ University of Alaska Regent's Policy, Part X – Academic Policy, Chapter VII – Research, Scholarship and Creative Activity, University of Alaska, http://www.alaska.edu/bor/regulation/10r/r10-07.doc.

³²⁰ *Id*.

³²¹ *Id*.

³²² A.R.S. § 15-1635.01. Transfer of technology developed by universities; patent policies; officer or employee interest in private entity.

facilitate the transfer of technology developed by the officer or employee of an institution, subject to approval by the board of regents.³²³

The Arizona Board of Regents ("ABOR") has an overall intellectual property policy governing the state universities.³²⁴ In addition, each of the universities has an individual intellectual property policy. Under ABOR Intellectual Property Policy, a state university may agree to give the research sponsor an exclusive option for a limited period of time for the right of first negotiation for a license to intellectual property owned by the university arising from a sponsored project. A state university may also agree to assign title to the sponsor. A copy of the agreement to license or assign title must be supplied to the inventor(s) and principal investigator(s) of the research, who have a right to appeal prior to the execution of the agreement.³²⁵ In cases of assignment of title, a provision for monetary support is required.

Due-diligence milestones are to be negotiated on a case-by-base basis to include a reassignment right exercisable by the university if the sponsor has not made a good-faith attempt to meet the negotiated due-diligence milestones. The reassignment right allows for the university to license the technology to other parties, either exclusively or non-exclusively, or to collect a maintenance fee from the sponsor until the sponsor determines that it will not commercialize the intellectual property and grants the rights back to the university. Also included is windfall provision, in which an appropriate payment or payment schedule is specified based on some mutually agreed upon threshold or event.

In cases of licensing, due diligence and march-in-rights are also maintained as in cases of assignment of title. In addition, a provision for reasonable and customary royalties is to be included.³²⁸ In cases of either licensing or assignment of title, the

³²³ *Id*.

³²⁴ *The University of Arizona Office of Technology Transfer*, University of Arizona, http://ott.arizona.edu/about_Policies.php.

³²⁵ *Id*.

³²⁶ *Id*.

³²⁷ *Id*.

³²⁸ Id.

university retains the right to use the intellectual property for academic purposes.³²⁹ The sponsor is also responsible for all patent costs resulting from sponsored research, within predetermined limits.³³⁰

In addition to technology transfers through sponsored research, a university may also enter into technology transfer agreements if either 1) an employee will be an officer, director, stockholder or maintain a material interest in the entity or 2) the technology transfer agreement is negotiated by a technology transfer or patent management firm in the performance of an agreement.³³¹

6.3.2 Specialized Funding Agency IP Policies

No information discovered.

6.4 Arkansas

6.4.1 University IP Policies

The Arkansas Science & Technology Authority ("ASTA") was created by statute in 1983 with the mission to bring the benefits of science and advanced technology to the people and state of Arkansas.³³² Under the statute, ASTA was given the authority to establish centers for applied technology, which are university units that conduct continuing programs of basic and applied research, development, and technology transfer in one or more technological areas in collaboration with and through the support of private enterprises.³³³ In order to encourage investment in the centers, the state provides tax credit equal to 33% of qualified research expenditures made by industry.³³⁴

ABOR Policy Manual Policy Number 6-908: Intellectual Property Policy, Arizona Board of Regents, http://www.abor.asu.edu/1_the_regents/policymanual/chap6/chap6_part2.htm#6-908.

³³⁰ *Id*.

³³¹ *Id*.

³³² *About the Authority*, The Arkansas Science & Technology Authority, http://www.accessarkansasscience.org/about.html.

³³³ A.C.A. § 15-3-130. Centers for applied technology; establishment.

³³⁴ Centers for Applied Technology Program, The Arkansas Science & Technology Authority, http://www.asta.arkansas.gov/Centersforappliedtech.html.

In 2005, Arkansas Public Finance Law was amended to specifically allow for state agencies to contract with business organizations where services are to be provided by persons both associated with the business organization and with a university which will retain proprietary interests in the intellectual property generated. The same statutory section allows for employees of a university to take a financial interest in companies which sponsor or commercialize university research, subject to university approval. Approval.

The University of Arkansas has one overarching policy addressing intellectual property, under Board Policy 210.1.³³⁷ Under the policy, rights in sponsored research are determined by contract between the university and the sponsor. Inventors retain the right to publish and disseminate the knowledge gained, subject to the sponsor's limited review of the materials for proprietary information.³³⁸

Under the policy, the university may receive equity in compensation for the conveyance of rights to business entities, including stock, securities, stock options, warrants, buildings, real or personal property, or other non-cash consideration. Similarly, an inventor or author may serve as a member of the board of directors or other governing board or as an officer or an employee (other than as a consultant) of a business entity that has an agreement with the University relating to the commercialization of inventions or works and in which the University has equity subject to prior review and approval by the Chancellor or the chief executive officer of the unit of the University.

The university's policy also addresses software created by employees to assist in education, identified as Technology Enhanced Course Materials ("TECM"). Copyright ownership of such materials is determined by the level of university resources used to

³³⁵ A.C.A. § 19-11-717. Institutions of higher education.

³³⁶ *Id*.

³³⁷ Office of Technology Licensing Inventor's Handbook, University of Arkansas, http://www.uark.edu/ua/techip/inventors/appendixa.html.

³³⁸ *Id*.

³³⁹ *Id*.

³⁴⁰ *Id*.

create it, ranging from retention of all rights by the author, to joint ownership with the university, or university ownership in works made for hire.³⁴¹

6.4.2 Specialized Funding Agency IP Policies

No information discovered.

6.5 California

6.5.1 University IP Policies

The University of California is established under Article 9 of Constitution of the State of California. The University of California is governed by The Regents, a 26-member board. In 2004, the California Legislature passed ACR 252, requesting that the California Council on Science and Technology "...create a special study group to develop recommendations to the Governor and the Legislature on how the state should treat intellectual property created under state contracts, grants, and agreements..." In January 2006, a report containing a series of recommendations for a statewide intellectual property policy was delivered to the California Legislature. While there have been several bills introduced to create a state intellectual property policy, none have passed into law. The report and resulting recommendations are discussed in a separate section.

The University of California has a patent policy, under the auspices of the Office of the President, applicable to all UC institutions.³⁴⁶ Under the patent policy, the university retains the right to all patents; however, the university may release the rights to inventions if either the university elects not to file a patent application, or the equity of

³⁴¹ Appendix B: Board Policy 210.2: Copyright and Distance Learning, University of Arkansas Inventor's Handbook, http://www.uark.edu/ua/techip/inventors/appendixb.html.

³⁴² West's Ann.Cal.Const. Art. 9, § 9.

³⁴³ *Id*.

³⁴⁴ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.16.

³⁴⁵ *Id.* at 15-16.

³⁴⁶ *University of California Patent Policy*, University of California, http://www.ucop.edu/ott/patentpolicy/patentpo.html#pol.

the situation clearly indicates such release should be given, provided in either case that no further research or development to develop that invention will be conducted involving University support or facilities, and provided further that a shop right is granted to the University.³⁴⁷

Research funding agreements may provide the sponsor a time-limited first right to negotiate a license to patentable inventions (other than plant patents) conceived and reduced to practice in the course of the sponsored research. Such licenses must be royalty-bearing, provide for diligent development, commercial marketing, or use as one condition for retention of the license; and (normally) require reimbursement of patent prosecution and maintenance costs, a license issue fee, and appropriate minimum annual royalties. The remaining intellectual property matters are addressed in a set of guidelines that allow for significant flexibility in the construction of contracts for sponsored research. 349

The university may receive equity from commercial partners, and the disposition of any net income from patents is to be prioritized against further research. The Chancellor's Conflict of Interest Advisory Committee shall review all sponsored research agreements, research gifts or consulting agreements where there is a potential conflict of interest, using the definitions set forth in University Policy on Disclosure of Financial Interest in Private Sponsors of Research (dated April, 1984) or in accordance with the University of California Policy on Disclosure of Financial Interests and Management of Conflicts of Interest Related to Sponsored Projects.

6.5.2 Specialized Funding IP Policies

The state's current research portfolio includes (but is not limited to) funding in the following science and technology areas: energy, HIV-AIDS, breast cancer, tobacco-

93

³⁴⁷ *University of California Patent Policy*, University of California, http://www.ucop.edu/ott/patentpolicy/patentpo.html#pol.

³⁴⁸ Schedule of Sponsor's Patent Rights, University of California Office of Technology Transfer, http://www.ucop.edu/ott/staff/sosprts.html.

³⁴⁹ Contract and Grant Manual, Intellection Property and Related Matters, University of California Office of Technology Transfer, http://www.ucop.edu/raohome/cgmanual/chap11.html#11-320.

³⁵⁰ *Id*.

related disease, sustainable agriculture, health and human services, children and families, transportation, energy research, and geothermal resources development. It also includes funding for the California Institutes for Science and Innovation administered by the University of California. The largest single research program is the Public Interest Energy Research (PIER) program. Managed by the California Energy Commission, the PIER program is funded by a collection of surcharges on retail electricity sales.³⁵¹

California's proposition 71, which passed in 2004, devotes \$3 billion in state funds to support stem-cell research. This is likely to create a battle over ownership rights to this cutting-edge technology, because the research will most likely proceed under some combination of federal, state, local, non-profit and private for-profit funding. In addition, the public's claim to reasonable access to life-saving medical breakthroughs that do arise from stem-cell research may press federal, state or local officials to consider compulsory licenses. The California Council on Science and Technology prepared an interim report in August 2005 outlining recommendations for a state intellectual property policy to govern the state grants for stem cell research; these recommendations are identical to those cited in the "Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature" section of this report. In February 2007, the California Institute for Regenerative Medicine (CIRM) approved 72 grants totaling approximately \$45 million over two years, to researchers at 20 academic and non-profit research centers throughout the state.

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³⁵¹ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.19.

³⁵² California gives go-ahead to stem-cell research, MSNBC.com, http://www.msnbc.msn.com/id/6384390/.

³⁵³ Sean M. O'Connor, *Intellectual Property Rights and Stem Cell Research: Who Owns the Medical Breakthroughs?*, New England Law Review, 2005.

³⁵⁴ *Id*.

³⁵⁵ CCST Releases Interim IP report for stem cell Institute, California Council on Science and Technology, http://www.ccst.us/newsletter/2005/2005oct1.php.

³⁵⁶ CIRM Awards First Stem Cell Research Grants, California Council on Science and Technology, http://www.ccst.us/calinews/2007/20070222CIRM.php.

6.6 Colorado

6.6.1 University IP Policies

The entity that is tasked with governing state-sponsored institutions of higher education is the Colorado Commission on Higher Education. Overall, the commission is responsible for establishing policy for Colorado's system of public higher education. See Colorado statute 23-1-106.5 mandates the duties of the commission concerning technology transfers between academia and industries. The commission is tasked with facilitating technology transfers through a research grant program, Technology Advancement Grant (TAG). This program aims to develop new technologies and materials in the universities' research laboratories in order to bring those technologies into the marketplace for the benefit of all Colorado residents. The commission also serves to evaluate the scientific value and potential commercial value of projects and award grant funds accordingly.

In accordance with the state law and policies mandated by the Board of Regents for the University of Colorado, the University maintains ownership of patentable inventions created by faculty, staff and students, where the work is supported by University funds or conducted in university operated facilities.³⁶³ Patentable inventions arising from university funds and facilities must be disclosed to the Technology Transfer Office.³⁶⁴ This office is responsible for reviewing the intellectual property disclosure within 90 days, and making a decision as to University interest in pursuing.³⁶⁵ Where the

³⁵⁷ Colorado Commission on Higher Education Master Plan, available at http://www.state.co.us/cche/agenda/mayiva1.html (last visited on Mar. 20, 2007).
358 Id.
359 Id.
360 Id.
361 Id.
362 Id.
363 Id.
364 Id.

intellectual property is owned by the university, the staff and faculty are prohibited from becoming directly involved in negotiating commercial agreements.³⁶⁶ Instead, this responsibility lies with the Technology Transfer Office.³⁶⁷

6.6.2 Specialized Funding Agency IP Policies

No information discovered.

6.7 Connecticut

6.7.1 University IP Policies

In 2003-2004 in the state of Connecticut, the Governor's Competitiveness
Council formed the Connecticut Technology Transfer and Commercialization Advisory
Board, which consisted of leaders from the State's top universities, corporations, venture
capital firms, and economic development organizations.³⁶⁸ One purpose of the board was
to focus on building a state agenda for science and technology leadership.³⁶⁹ In a 2004
report to the Competitiveness Council, the board highlighted various university models
for technology transfer and commercialization as a benchmark for Connecticut.³⁷⁰ The
report was intended to lay the groundwork for future state, university, and corporate
actions that leverage Connecticut's university research resources.³⁷¹ The report found
that Connecticut had not fully capitalized on its strengths, nor provided the same level of
investments as some competing states to stimulate innovation through early-stage funds,
innovation centers, and university-based programs.³⁷² Some recommendations for the
state included seeking more federal funding to support targeted initiatives, increase state
funding through angel and seed capital, and educate policy makers, in addition to other

³⁶⁶ *Id*.

³⁶⁷ *Id*.

³⁶⁸ Innovation Associates, *Report*, http://www.youbelonginct.com/pupload/techtransreportweb.pdf (last visited April 25, 2007).

³⁶⁹ *Id*.

³⁷⁰ *Id*.

³⁷¹ *Id*.

³⁷² *Id*.

recommendations.³⁷³ It's not clear how much of the report has become state policy. Yet like many other states, Connecticut has promulgated policies concerning sponsored research.

Technology transfer policy is administered by the General Statutes of Connecticut section 10a-110 thru 10a-110g.³⁷⁴ Pursuant to section 10a-110a, a management foundation is tasked with the responsibility of acquiring and disbursing funding towards technological research.³⁷⁵ In addition, the foundation also files applications for patents and assigns licenses for the inventions.³⁷⁶ The "entire beneficial ownership" of the research is vested in the University.³⁷⁷

The University of Connecticut's intellectual property policy is in accordance with Connecticut law. Under section 10a-110b of the General Statutes of Connecticut, the University of Connecticut is entitled to own the entire right, title, and interest of any invention created by University employees emerging from research conducted while performing University duties or which is created or developed with the use of University resources. This does not apply where a sponsor has existing patents or pending patent applications for technologies developed by the Sponsor outside the university. Under section 10a-110g of the General Statutes of Connecticut the University's copyright policy specifies that any copyrightable product of authorship protected by actual or potential copyright belongs to the author(s). Where such works have been produced through the use of University resources the University may seek a reasonable return upon

³⁷³ *Id*.

³⁷⁴ General Statutes of Connecticut Technology Transfer Policies, available at http://www.cga.ct.gov/2007/pub/Chap185b.htm#Sec10a-110.htm (last visited on Apr. 1 2007).

³⁷⁵ *Id*.

³⁷⁶ *Id*.

³⁷⁷ *Id*.

³⁷⁸ Policy and Procedures Regarding Research Collaborations with Industrial Partners and Technology Transfer, available at http://www.rac.uconn.edu/techtransfer.html (last visited on Mar. 20, 2007).

³⁷⁹ *Id*.

³⁸⁰ *Id*.

commercialization. ³⁸¹ Also, if copyrightable material is produced under a grant or sponsored research agreement awarded to the University and the University needs to fulfill a contractual obligation with its sponsor, the author is required to assign his/her rights to such copyright to the University. ³⁸² The University also requires students to assign rights to inventions occurring at the University if there was substantial use of university resources to develop the invention, where the student is performing services as part of employment at the university, and where the student is participating in sponsored research. ³⁸³

6.7.2 Specialized Funding Agency IP Policies

No information discovered.

6.8 Delaware

6.8.1 University IP Policies

According to the University of Delaware's intellectual property policy, research that is funded by the government is treated in accordance with the provisions of the Bayh-Dole Act.³⁸⁴ University personnel who develop inventions while associated with the University must cooperate with the University in establishing the rights to the inventions.³⁸⁵ This policy is irrespective of inventions made with or without the use of university resources.³⁸⁶

6.8.2 Specialized Funding Agency IP Policies

No information discovered.



³⁸⁴ University of Delaware Inventions, Discoveries, and Patents Policies and Procedures Manual, available at http://www.udel.edu/ExecVP/polprod/6-06.html (last visited on Mar. 20, 2007).

³⁸⁵ *Id*.

³⁸⁶ *Id*.

6.9 Florida

6.9.1 University IP Policies

In 2002, the Florida Senate introduced a bill concerning technology transfer.³⁸⁷ The bill placed the burden of addressing technology transfer issues on the Florida Board of Education.³⁸⁸ The bill recognized that technology transfer produces economic development benefits for the public and is a goal of the state.³⁸⁹ The bill sought to minimize the legal and policy barriers to technology transfer while making available more technology transfer resources.³⁹⁰ These goals are intended to be accomplished through the Florida Board of Education.³⁹¹ The board was also tasked with creating mechanisms to increase University and industry interaction, and facilitating technology transfer-related collaboration between universities in the state.³⁹² Intellectual property policy in the state is based on Florida Statutes section 1004.23, which authorizes Florida universities to license, protect, and deal with the work produced by their own personnel.³⁹³

At the University of Florida the intellectual property policy is based on section 1004.23, Fla. Stat.³⁹⁴ Accordingly, an invention created in a field in which the creator practices at the University or with the use of University resources, is the property of the University.³⁹⁵ The income however may be shared with the creator, arising from

³⁸⁷ Florida Senate 2002 Technology Transfer Bill ,available at http://www.leg.state.fl.us/data/session/2002/Senate/bills/billtext/pdf/s2278.pdf (last visited on Mar. 20, 2007).

³⁸⁸ *Id*.

³⁸⁹ *Id*.

³⁹⁰ *Id*.

³⁹¹ *Id*.

³⁹² *Id*.

³⁹³ *Id*.

³⁹⁴ University of Florida Intellectual Property Policy, available at http://rgp.ufl.edu/otl/pdf/ipp.pdf (last visited on Mar. 20. 2007).

³⁹⁵ *Id*.

agreements with outside sponsors.³⁹⁶ This does not apply to inventions made outside the field in which the creator practices at the University and for which no university resource have been utilized. ³⁹⁷ A creator must nevertheless disclose all inventions, even those not involving university resources.³⁹⁸ Works and inventions developed through financial support from outside sponsors such as state and local governments are also the property of the University.³⁹⁹

The Intellectual Property policies at Florida State University are very similar to the University of Florida's policies in that the University has the right to claim title to all inventions created by faculty and staff "within the scope of skill and activity implied by their duties."

6.9.2 Specialized Funding Agency IP Policies

No information discovered.

6.10 Georgia

6.10.1 University IP Polices

Intellectual property for Georgia's state-funded postsecondary education institutions is governed by the Board of Regents of the University System of Georgia's intellectual property policy. The Board of Regents' intellectual property policy dictates its institutions' rights to intellectual property ownership in the specific categories of sponsor-supported efforts, institution-assigned efforts, institution-assisted individual

³⁹⁶ Id. ³⁹⁷ Id. ³⁹⁸ Id. ³⁹⁹ Id.

⁴⁰⁰ Florida State University Technology Transfer Policies, available at http://www.techtransfer.fsu.edu/policies.html (last visited on Apr. 1, 2007).

⁴⁰¹ Board of Regents of the University System of Georgia, available at: http://www.usg.edu/regents/policymanual/600.phtml (last visited April 23, 2007); *see also* Georgia General Assembly—House Bill 606, available at: http://www.legis.state.ga.us/legis/2007_08/fulltext/hb606.htm (for information regarding Georgia's state code).

efforts, individual efforts, and other efforts. The Board of Regents requires that each institution of the System develop policies and procedures for the administration of its intellectual property policy, and that an intellectual property committee be appointed by the institution's president. The intellectual property committee is required to recommend to the president the rights and equities in intellectual property created by the institution's faculty, staff, or students. The Board of Regents allows an institution to form other committees to address specific intellectual property issues.

An institution may implement its intellectual property policy by: (1) developing develop and managing its licensing program through an independent assistance organization to secure competent evaluation of intellectual property, expeditious filing of applications for patents or other protection and aggressive licensing and administration of Intellectual Property; (2) developing and managing its licensing program through an affiliated nonprofit corporation such as the Georgia State University Research Foundation, Inc., the Georgia Tech Research Corporation or other nonprofit organizations established for this purpose; (3) developing and managing independently its own licensing program; or (4) releasing intellectual property to which the institution has title or an interest to the inventor or creator for management and development as a private venture after the execution of an agreement providing for a suitable division of royalty income. Revenue and equity distribution for intellectual property invented under institution and sponsored efforts are governed generally by the Board of Regents and specifically by the individual institutions. The Board of Regents maintains no specific policy regarding conflicts of interest or equity management and distribution, but

⁴⁰²Board of Regents of the University System of Georgia, available at: http://www.usg.edu/regents/policymanual/600.phtml (last visited April 23, 2007).

⁴⁰³ *Id*.

⁴⁰⁴ *Id*.

⁴⁰⁵ *Id*.

⁴⁰⁶ *Id*.

⁴⁰⁷ Id.

individual institutions may maintain such policies in accordance with the Board of Regent's general intellectual property policy. 408

6.10.2 Specialized Funding Agency IP Policies

No information discovered.

6.11 Hawaii

6.11.1 University IP Policies

In 1965, the Hawaiian Legislature established (under 304A-3001-3011 of the Hawaii Revised Statutes) a state agency known as the Research Corporation of the University of Hawaii ("RCUH"). For administrative purposes, RCUH was attached to the University of Hawaii through an internal agreement which defines the basic responsibilities of each party and the financial arrangement to pay for the cost of services rendered by each party. RCUH's services include: advance funding, equipment loans, tax reporting, liability/specialty insurance coverage, accounts payable/receivable, equipment accountability, final fiscal reporting, training, employee hiring/compensation/health benefits/insurance/etc., payroll, leases/rentals, and other business transactions. 411

RCUH hires personnel and procures goods and services on behalf of its clients. 412 The University of Hawaii is RCUH's primary client, but other clients include other state agencies, and private research and training organizations. 413 RCUH maintains its own personnel, payroll, accounting, and disbursing systems, all independent of the state and University systems, allowing RCUH to process transactions expeditiously, which in turn

⁴⁰⁸ *Id*.

⁴⁰⁹ The Research Corporation of the University of Hawaii, *Mission and Goals*, available at: https://securercuh01.rcuh.com/000168d/rcuh1.nsf/Site+Documents/About+RCUH+Mission (last visited April 23, 2007).

⁴¹⁰ *Id*.

⁴¹¹ *Id*.

⁴¹² *Id*.

⁴¹³ *Id*.

makes it possible for researchers to focus more on research rather than administration. RCUH receives no state funding, and supports itself through fees charged for its services.⁴¹⁴

RCUH is controlled by general management and a Board of Directors consisting of ten members (five members appointed by the Government, and confirmed by the Senate, and five members of the University of Hawaii Board of Regents selected by the Board of Regents). The President of the University of Hawaii also serves as the President of RCUH, while an executive director runs the day-to-day affairs of the Corporation. RCUH maintains a "core" staff of approximately thirty employees in the departments of Accounting, Disbursing/Purchasing, Human Resources, Project Management, and the Executive Director's Office. At any given time, there are on average 2,200 project personnel on RCUH's payroll.

Through its intellectual property policy, RCUH claims complete ownership of all intellectual property by anyone working under an RCUH direct project, maintain the right to patent any invention where RCUH is a contractor or grantee, following applicable laws. RCUH also maintains disclosure, licensing, and reassignment provisions in its intellectual property policy. 418

Keeping in mind the unique relationship between the University of Hawaii and the RCUH mentioned above, the University of Hawaii has its own intellectual property policy. All persons employed by the University of Hawaii are required to submit ideas for patentable inventions, and must follow specific rules and deadlines to do so.⁴¹⁹ The

⁴¹⁵ *Id*.

⁴¹⁶ *Id*.

⁴¹⁷ *Id*.

⁴¹⁴ *Id*.

⁴¹⁸ The Research Corporation of the University of Hawaii, *Policies and Procedures*, available at: https://securercuh01.rcuh.com/000168d/rcuh1.nsf/7b1e3e85b13603260a2564d6001576fd/c9a29d8dbaecc2 820a2570d60004c223?OpenDocument (last visited April 23, 2007).

⁴¹⁹ University of Hawai'i—Office of Technology Transfer & Economic Development, *University of Hawai'I Patent and Copyright Policy*, available at: http://www.mic.hawaii.edu/faculty/borpolicy.html (last visited April 23, 2007).

University will relinquish its rights to the inventor in the case that the invention is judged by the patent as personal or private research; or the University decides not to secure a patent for an invention which is a result of personal or private research. The University intellectual property policy contains various sections dictating their rights with regard to inventions resulting from personal or private research, research supported by state funds, and research supported by an outside agency. The University of Hawaii distributes royalties to the inventor, the inventor's unit, and the University of Hawaii in different variations depending on the amount of net royalties, with the greater the net royalties resulting in the greatest percentage going to the University and the inventor's unit, and the smallest percentage going to the inventor. For example, when net royalties are less than \$100,000, the inventor receives 66.67 percent of net royalties, but only receives 33.33 percent of net royalties when the net royalties are greater than \$300,000. The University of Hawaii requires the reporting of conflicts interest and appears to have no specific policies regarding equity distribution.

6.11.2 Specialized Funding Agencies' IP Policies

No information discovered.

6.12 Idaho

6.12.1 University IP Policies

While Idaho does not maintain any intellectual property policies, the state still plays a role in managing the intellectual property policies of state-financed colleges and

⁴²⁰ *Id*.

⁴²¹ *Id*.

⁴²² University of Hawai'i—New Distribution Formula for UH Royalties Memorandum, available at: http://www.mic.hawaii.edu/gainsmemo-opt.pdf (last visited April 23, 2007).

⁴²³ *Id*.

⁴²⁴ University of Hawai'i—Office of Technology Transfer & Economic Development, *University of Hawai'I Patent and Copyright Policy*, available at: http://www.mic.hawaii.edu/faculty/borpolicy.html (last visited April 23, 2007).

universities through the Idaho State Board of Education. While each post-secondary institution may be governed by their own specific or unique intellectual property policies, it appears that Idaho's state university intellectual property policies are governed at least in part by intellectual property policies and rules set by a State Board made up of the State Board of Education (on behalf of the State of Idaho) and the Board of Regents (on behalf of the University of Idaho). Institutions affected by the State Board's intellectual property policies are Boise State University, Idaho State University, Lewis-Clark State College, the University of Idaho, and Eastern Idaho Technical College. The State Board claims ownership of any invention or patentable discovery developed under any work performed by an employee of the State Board that meet specified criteria, and maintains other regulations involving the submission, reporting, review, and assignments of patentable inventions.

The State Board delegates to Idaho's post-secondary educational institutions the right to transfer and convey ownership in intellectual properties developed within the institutions under the patents and copyright rule. The intent of the patents and copyright rule is to allow Idaho's post-secondary institutions the ability to play appropriate roles in knowledge transfer and economic growth and development. This rule allows the institutions to (1) grant rights to owned intellectual properties to research foundations for further development or transfer; (2) themselves act as licensors to convey intellectual property rights to commercial ventures; (3) grant exclusive rights to a licensee; (4) collect and disburse license payments to inventors and their departments and colleges, as well as to their institution for the general support of research within the

⁴²⁵ Idaho State Board of Education, *Policies and Procedures-Intellectual Property*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

⁴²⁶ *Id*.

⁴²⁷ Idaho State Board of Education, *Policies and Procedures-Policy Making Authority*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

⁴²⁸ Idaho State Board of Education, *Policies and Procedures-Intellectual Property*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

⁴²⁹ *Id*.

⁴³⁰ Id.

institutions; and (5) permit institutional employees the right to participate in ownership and governance of companies licensed by the institutions to produce and market the discoveries, provided the conflict of interest rules are followed. The State Board's conflict of interest policy states that employees must disclose, on a continuing basis, all their relationships and business affiliations that reasonably could giver rise to a conflict of interest because of their duties and/or responsibilities in that business. It does not appear that the State Board has any policies governing equity distribution, although individual institutions may supplement their own policies with such provisions.

6.12.2 Specialized Funding Agency IP Policies

No information discovered.

6.13 Illinois

6.13.1 University IP Policies

The University of Illinois System ("University") maintains an intellectual property policy for its three university campuses (Chicago, Springfield, and Urbana-Champaign). The University of Illinois System's Intellectual Property policy maintains that intellectual property shall belong to the University if it was invented or made by: (1) a University employee, as a result of her duties, or (2) any person that used University facilities to create the intellectual property. 432

The policy also governs the Universities' intellectual property interests with regard to disclosure of the creation of intellectual property, evaluation of decisions, rules regarding the abandonment of the intellectual property, rules regarding the University's acceptance of independently owned intellectual property, consulting agreements, and appeals. The policy allows the University to license intellectual property at its own discretion, on an exclusive or non-exclusive basis, so long as it is consistent with the

⁴³¹ Idaho State Board of Education, *Memo on Intellectual Property Policy*, available at: http://www.boardofed.idaho.gov/meetings/2001/May01/itemb4a.pdf (last visited April 23, 2007).

⁴³² University of Illinois, Policies—*Article III, Intellectual Property*, available at: http://www.uillinois.edu/trustees/rules.html#art3 (last visited April 23, 2007).

⁴³³ *Id*.

public interest.⁴³⁴ The policy maintains that intellectual property may only be licensed to licensees who show technical and business capabilities.⁴³⁵ The policy also maintains a conflict of interest police subjecting University employees to review of potential conflicts of interest and commitment issues and approval of conflict management plans that coincide with University policy.⁴³⁶

The president has the ultimate authority for the stewardship of intellectual property developed at the Universities, with the vice president for technology and economic development having a direct line of authority for University offices and entities involved in technology commercialization. The president and vice president for technology shall consult with chancellors and vice-chancellors regarding intellectual property issues. The University also maintains a University Intellectual Property Committee which is appointed by the president every year to make recommendations concerning intellectual property issues.

The University's policy for the distribution of proceeds received from intellectual property revenue, distributes 40% of revenue to the creator, 40% to the University, and 20% to the originating unit. The University also maintains an equity distribution clause which distributes equity received from an agreement with a corporation or other business entity to exploit intellectual property owned by the University among the creators, the University, and the originating unit in the same percentages as listed above. A creator is not entitled to proceeds if the University accepts research support in the form of a sponsored research agreement of unrestricted grant as part of the

434 Id.
435 Id.
436 Id.
437 Id.
438 Id.
439 Id.
440 Id.
441 Id

consideration in an intellectual property license in place of an option fee, license fee, or royalty. 442

6.13.2 Specialized Funding Agency IP Policies

No information discovered.

6.14 Indiana

6.14.1 University IP Policies

Indiana University is recognized as a state university of Indiana under Indiana Code 20-12-23-1. 443

Indiana University (IU) has an intellectual property policy that is similar to other universities across the nation. The creator of an invention must assign the rights applicable in intellectual property to IU. 444 Of the first \$100,000 made, the inventor receives 50%, the inventor's campus receives 25%, and the University receives 25%. 445 Of the next \$300,000 made, the inventor receives 40%, the campus receives 25%, and the University 35%. 446 Of the next \$600,000 the inventor receives 30%, the campus 25%, and the University 45%. For revenues exceeding \$1,000,000, the inventor receives 25%, the campus 25%, and the University receives 50%. 448

Furthermore, Indiana University shall own all equity rights in the intellectual property. If monetary proceeds are generated by the sale of equity interests, they will be distributed according to the revenue policy listed above. 449 Indiana University will set

⁴⁴⁶ *Id*.

⁴⁴⁷ *Id*.

⁴⁴⁸ *Id*.

⁴⁴⁹ *Id*.

⁴⁴² *Id*.

⁴⁴³ Indiana Code 20-12-23 available at http://www.in.gov/legislative/ic/code/title20/ar12/ch23.html (last visited April 21, 2007).

⁴⁴⁴ Research at IU, available at http://www.research.indiana.edu/respol/intprop.html#2 (last visited April 21, 2007).

⁴⁴⁵ *Id*.

aside a portion of the equity interests which is equal in value to the costs incurred by the University for obtaining intellectual property protection for the technology in question.⁴⁵⁰

6.14.2 Specialized Funding Agency IP Policies

No information discovered.

6.15 lowa

6.15.1 University IP Policies

The University of Iowa is codified under Chapter 263 of the Iowa Code. The state of Iowa does not have a comprehensive intellectual property policy but the University of Iowa does.

The University of Iowa assumes ownership of patents on inventions created by its employees through a designee, the University of Iowa Research Foundation (UIRF). ⁴⁵¹ If the invention is a product of federal funds, then the assertion of ownership stems from federal law. ⁴⁵² Furthermore, the policy applies to technology made by University employees or postdoctoral appointees in the course of their employment or appointment or in a field or discipline reasonably related to the inventor's field of employment or appointment. ⁴⁵³ Also, the policy applies to inventions enabled by significant use of University resources when made by University employees, postdoctoral appointees, students whose inventive contribution did not arise from employment by the University, or institutional visitors not employed by the University. ⁴⁵⁴

Under the University policy, the first \$100,000 of income will go to the inventor. After that, 25% to the inventor, 25% to UIRF, 20% to a research enrichment fund (REF), 15% to the department from which the invention originated, and 15% to the college from

⁴⁵⁰ *Id*.

⁴⁵¹ University of Iowa Intellectual Property Policy, available at http://www.uiowa.edu/~our/opmanual/v/30.htm#303 (last visited April 21, 2007).

⁴⁵² *Id*.

⁴⁵³ *Id*.

⁴⁵⁴ *Id*.

which the invention was created.⁴⁵⁵ When the annual income is greater than \$10 million, the next \$5 million in annual income is distributed accordingly: 25% to the inventor; 20% to UIRF; 16% to REF; 12% to the originating department; 12% to the originating college; and 15% to the University.⁴⁵⁶

6.15.2 Specialized Funding Agency IP Policies

No information discovered.

6.16 Kansas

6.16.1 University IP Policies

The state of Kansas does not have a comprehensive intellectual property policy. However the University of Kansas

The University of Kansas has a policy for inventions that have an actual or projected market value in excess of \$10,000. The ownership rights in such inventions can be assigned to an independent organization for the purposes of promoting research and development of the intellectual property. One third of the revenue accumulated from the technology is awarded to the inventor. One third is given to KU Center for Research, and the last third is awarded to the inventor's department. If any revenue has been made from the invention by means of royalties, licensing fees, or other charges, no less than 25% of the revenues are to be paid to the inventor.

⁴⁵⁵ Id.

⁴⁵⁶ *Id*.

⁴⁵⁷ Kansas Board of Regents – Academic Policies, available at http://www.kansasregents.org/academic/policy/intel.html (last visited April 21, 2007).

⁴⁵⁸ *Id*.

⁴⁵⁹ Technology Transfer Revenue Distribution Policy, available at http://www.rcr.ku.edu/coi/revenue dist/revenue dist.shtml (last visited April 21, 2007).

⁴⁶⁰ Kansas Board of Regents – Academic Policies, available at http://www.kansasregents.org/academic/policy/intel.html (last visited April 21, 2007).

Furthermore, an inventor who participates in founding a company may receive Founder's equity and shall also receive the inventor's share of revenue from licensing University of Kansas technology to that corporation. 461

6.16.2 Specialized Funding Agency IP Policies

No information discovered.

6.17 Kentucky

6.17.1 University IP Policies

Kentucky does not have a statewide intellectual property policy. However, the Kentucky Cabinet for Economic Development has undertaken several policies to help foster the growth of technology in their state. Furthermore, the University of Kentucky has a comprehensive commercialization policy.

The University of Kentucky has its own intellectual property policy. Under this policy, intellectual property consists of anything patentable, copyrightable, and biological materials such as cell lines. All rights in the intellectual property are owned and controlled by the University of Kentucky Research Foundation (UKRF). UKRF then gives Kentucky Technology, Inc. (KTI), 100% owned by UKRF, a right of first refusal on intellectual property disclosures in exchange for a license fee to be paid by KTI to UKRF. Net calendar year royalty or license income derived from commercialization is shared as follows: 40% to the originator, 20% to the originators department or immediate administrative unit, 20% to the dean of the originator's college, and 20% to UKRF.

⁴⁶¹ Technology Transfer Revenue Distribution Policy, available at http://www.rcr.ku.edu/coi/revenue dist/revenue dist.shtml (last visited April 21, 2007).

⁴⁶² University of Kentucky Intellectual Property Disposition, available at http://www.uky.edu/Regulations/AR/ar034.pdf (last visited April 21, 2007).

⁴⁶³ *Id*.

⁴⁶⁴ *Id*.

⁴⁶⁵ *Id*.

6.17.2 Specialized Funding Agency IP Policies

The Enterprise Fund is a set of four programs aimed to attract research and development work. The Kentucky Research and Development Voucher Program provides state funds to small and medium sized companies to undertake research and development work with a Kentucky university. This voucher provides an award of \$200,000 over two years. The Kentucky Rural Innovation Program provides seed funds to rural Kentucky businesses to conduct research and development and entrepreneurial innovation in partnership with a Kentucky post secondary institution. The ICC Concept Pool provides grants of up to \$25,000 to assist businesses and individuals at the earliest states of project feasibility and concept development. The Gap Fund/Executive in Residence Program provides follow-on funding of up to \$400,000 for previously funded high-performing qualified companies and must be matched by the company, which occurs generally as part of a new, minimum \$1 million round.

6.18 Louisiana

6.18.1 University IP Policies

The Office of Sponsored Programs has a standard research agreement template modeled after the "Simplified and Standard Model Agreements for Industry-University Cooperative Research," which was a joint effort of the Government-University-Industry-Research Roundtable of the National Academy of Sciences and the Industrial Research Institute. The intent of the standard research agreement is to streamline the negotiation process and to decrease the time and effort required to reach an agreement among the parties involved. The involved of the Sponsor of the Spo

⁴⁶⁶ The Kentucky Cabinet for Economic Development, available at http://www.thinkkentucky.com/DCI/DCIStateRes.aspx (last visited April 21, 2007).

⁴⁶⁷ *Id*.

⁴⁶⁸ *Id*.

⁴⁶⁹ *Id*.

⁴⁷⁰ Office of Intellectual Property, Commercialization and Development, *Frequently Asked Questions*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/FAQs?OpenDocument#sponres, (last visited Mar. 7, 2007).

⁴⁷¹ *Id*.

As a general rule, anything an employee invents belongs to LSU, regardless of time of the day, day of the week, or month of the year; and regardless of whether LSU equipment and other resources were used when the invention was conceived or reduced to practice. There is a narrow exception for some inventions unrelated to the employee's field of expertise. The exception arises when the invention is created on a University employee's own time, without the use of LSU facilities or funds, and is in an area or field that has nothing to do with the inventors LSU position. 473

Ownership of intellectual property which is the result of University-Assisted or Assigned research is as a general rule reserved to LSU. 474 Ownership of intellectual property which is the result of outside sponsorship will depend on the details of the individual research contract or agreement. In general, LSU retains title to intellectual property rights but may grant the sponsor the first opportunity to license the technology under commercially reasonable terms after negotiation. 475

The policy states that title to inventions resulting from federal government sponsored research belongs to LSU. 476 When a patent on such an invention is issued to

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⁴⁷² Office of Intellectual Property, Commercialization and Development, *Inventors and Researchers: Policies and Procedures*, Available at:

http://appl003.lsu.edu/oip/oip.nsf/\$Content/Policies+and+Procedures?OpenDocument, (last visited Mar. 7, 2007).

⁴⁷³ Office of Intellectual Property, Commercialization and Development, *Frequently Asked Questions*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/FAQs?OpenDocument#sponres, (last visited Mar. 7, 2007).

⁴⁷⁴ Office of Intellectual Property, Commercialization and Development, *Inventors and Researchers: Policies and Procedures*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/Policies+and+Procedures?OpenDocument, (last visited Mar. 7, 2007).

⁴⁷⁵ Office of Intellectual Property, Commercialization and Development, *Frequently Asked Questions*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/FAQs?OpenDocument#sponres, (last visited Mar. 7, 2007).

⁴⁷⁶ Office of Intellectual Property, Commercialization and Development, *Inventors and Researchers: Policies and Procedures*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/Policies+and+Procedures?OpenDocument, (last visited Mar. 3, 2007).

LSU, the federal government has a royalty-free license to use the invention.⁴⁷⁷ All state sponsored research is owned by LSU outright.⁴⁷⁸

6.18.2 Specialized Funding Agency IP Policies

No information discovered.

6.19 Maine

6.19.1 University IP Policies

On September 29, 1986 the Board of Trustees for the University of Maine System approved their "Statement of Policy Governing Patents & Copyrights."479 The objectives of the policy are to determine the rights of the University, scholars, and sponsors with relation to intellectual property, to increase incentive for the University community to create "intellectual effort," and to recognize the right of authors and inventors to realize tangible benefits from intellectual property. ⁴⁸⁰

Upon the University making the determination to exercise its right to intellectual property, the policy states that it will do so quickly to obtain legal protection, to search and initiate negotiations with potential licensees, or to take appropriate steps to bring the development into commercial use. When determining the rights and obligations that result from a new development, the degree of University involvement is first determined. Rights and obligations stem from individual efforts, University-assisted efforts, University-assigned efforts, outside sponsorship, or federal government sponsorship.

The University will not assert claims on income from or patents developed from the individual efforts of its employees. Individual efforts resulting in intellectual

⁴⁷⁷ Id.

⁴⁷⁸ *Id*.

⁴⁷⁹ Office of Research and Sponsored Programs-University of Maine System, *Statement of Policy Governing Patents & Copyrights*, Available at: http://orspdocs.umesp.maine.edu/Policies/Patents.htm, (last visited Mar. 3, 2007).

⁴⁸⁰ *Id*.

⁴⁸¹ *Id*.

⁴⁸² *Id*.

property are considered research conducted wholly at the expense of the scholar, on the scholar's own time, with no use or only incidental use of University facilities, equipment, or materials. If the scholar can demonstrate that these criteria are met, the University, if requested to do so, will waive any claims to the intellectual property. 484

University-assisted efforts resulting in intellectual property are considered research involving more than incidental use of University facilities, equipment or materials. The policy presumes an equity interest on the part of both the scholar and the University. Ownership resides with the University, but the scholar maintains the right to share in any resulting income. The University may waive its interest to permit the property to be exploited at the inventor's expense, but in such cases, a royalty-free license is granted to the University for its own scholarly and educational purposes because of the use of its facilities in the creation of the intellectual property. Income realized from or patents resulting from University-assisted work under the policy are divided as follows:

1)15% of gross income to the scholar; 2) 5% of gross income to the scholar's department, or other administrative unit; and 3) 80% to the University.

University-assigned efforts resulting in intellectual property are considered research by scholars which have been specifically assigned to the University, or which were a result of the University financing the scholar's time, or through the direct and significant use of University facilities, equipment, or materials. In this case a determination of ownership is made by the University and will likely be assigned to a competent agency, firm, or foundation with which the University has a publishing, evaluation or exploitation agreement. Income realized from patents resulting from

⁴⁸³ *Id*.

⁴⁸⁴ *Id*.

⁴⁸⁵ *Id*.

⁴⁸⁶ *Id*.

⁴⁸⁷ *Id*.

⁴⁸⁸ *Id*.

⁴⁸⁹ *Id*.

⁴⁹⁰ *Id*.

University-assisted work under the policy is divided as follows: 1) 15% of gross income to scholar (or divided equally among multiple scholars); 2) 5% of gross income to the scholar's department, or other administrative unit; and 3) 80% to University. 491

Outside sponsorship which results in intellectual property is considered research financed wholly or partially by industrial, philanthropic or other organizations, or by individuals. Ownership of such intellectual property is handled according to the terms of the contract, grant or other agreement governing the work. Income derived from patents developed as a result of outside sponsorship is allocated in accordance with the terms of the contract or agreement. Any income paid to the University is divided as follows: 1) 15% of gross income to scholar; 2) 5% of gross income to the scholar's department or other administrative unit; and 3) 80% to University.

6.19.2 Specialized Funding Agency IP Policies

The "Maine Intellectual Commons" is a project of the University of Maine advocating and promoting open access to scholarly and creative work. ⁴⁹⁴ The project proposes open license terms and copyright policies. ⁴⁹⁵ The goal of the group is to create an institutional policy where intellectual property clearly resides with creators, and encourages those creators to place their work in the public domain or open access licensing environments. ⁴⁹⁶ Although the emphasis of the project is making published scholarship open to avoid the increasing expense to universities for such scholarship, and not the innovation and exploitation of new technologies, the emphasis of this project

⁴⁹¹ *Id*.

⁴⁹² Id.

⁴⁹³ *Id*.

⁴⁹⁴ The Maine Intellectual Commons: Establishing New Standards for Scholarly and Creative Access, *Welcome*. Available at: http://commons.umaine.edu/home.html, (last visited Mar. 8, 2007).

⁴⁹⁵ *Id*.

⁴⁹⁶ *Id*.

could evolve into a future University patent policy and further demonstrates an example of the open source agenda.⁴⁹⁷

6.20 Maryland

6.20.1 University IP Policies

Current state code legislation concerning Maryland Stem Cell Research specifically provides that grants for research will be given "consistent with federal and State law, [which] reflects the intellectual property policies of the institution." The language states that grant monies are provided pursuant to relevant law and the institution's intellectual property policy, seeming to infer that the intellectual property policies reside with the institutions, not with the state of Maryland.

The University System of Maryland's intellectual property policies are stated in the "Consolidated USM and UM Policies and Procedures Manual," and were approved by the Board of Regents on February 8, 2002. ⁴⁹⁹ The policy's stated objective is to establish and maintain the interests of the creators, the University, and the public through full and fair dissemination of the protected knowledge. ⁵⁰⁰

Sponsored research agreements provide that all intellectual property developed under such an agreement belong to the University. However, the University, on a case-by-case basis may agree to assign ownership or licensing rights to the sponsor, subject to the University's right to use and reproduce the intellectual property for research and educational purposes. 502

⁵⁰¹ *Id*.

⁴⁹⁷ See, The Maine Intellectual Commons: Establishing New Standards for Scholarly and Creative Access, *Welcome*. Available at: http://commons.umaine.edu/home.html, (last visited Mar. 8, 2007).

⁴⁹⁸ MD Code, Art. 83A, § 5-2B-08.

⁴⁹⁹ Office of Technology Commercialization Division of Research, *Consolidated USM and UM Policies and Procedures (effective July 1, 2002)*, Available at: http://www.otc.umd.edu/umpolicies/usmpolicies/usmpolicies/feriuly12002.html, (last visited Mar. 7, 2007).

⁵⁰⁰ *Id*.

⁵⁰² Id.

Any research project that is funded, in whole or in part, by a federal agency is subject to specific federal statutes and regulations. Those regulations generally allow the University to elect title to any invention that is conceived of or first actually reduced to practice in the performance of federally funded research with the purpose of commercializing the invention, subject to the government's rights which include reservation of a nonexclusive license to use the invention world-wide for government purposes. 504

6.20.2 Specialized Funding Agency IP Policies

No information discovered.

6.21 Massachusetts

6.21.1 University IP Policies

The University of Massachusetts disperses non-equity revenue derived from commercialization, after the University is reimbursed for any out-of-pocket expenses incurred in obtaining and maintaining patent protection for intellectual property, and evaluating and marketing such intellectual property. The remaining net income is distributed as follows: 1) 15% to the University Office of Commercial Ventures and Intellectual Property (CVIP) to fund patents, CVIP operations, and research grants; 2) 30% to the inventor or creator; 3) 15% to the University entity or entities that provided the resources for development of the Intellectual Property, to fund research and scholarship; and 4) 40% to the college of the inventor or creator to fund research and scholarship. So

6.21.2 Specialized Funding Agency IP Policies

The Harvard Office of Technology Transfer and the Office of Sponsored Research (Harvard) are charged to introduce University-developed intellectual property

⁵⁰³ *Id*.

⁵⁰⁴ *Id*.

⁵⁰⁵ UMass.edu, University of Massachusetts Intellectual Property Policy, *Available at*: http://www.umass.edu/research/intelfac.html, (Last visited Mar. 16, 2007).

⁵⁰⁶ *Id*.

into public use by collaborating with private industry sponsors and generating financial return to the University while protecting academic freedoms.⁵⁰⁷

The sponsor and Harvard negotiate the terms of a license agreement for disclosed intellectual property in good faith within a negotiable time period from the date of notification of discovery or invention. The Harvard license agreement requires the licensee to use its best efforts to introduce products incorporating the licensed technology into public use as rapidly as practicable, for a royalty that is usual and customary in the particular field. Harvard's standard royalty distribution policy states that for the first \$50,000 of net income: 1) 35% to inventors as a group; 2) 30% to the inventor's department; 3) 20% to the Dean of the inventor's School; and 4) 15% to the University.

Generally, half the departmental share is placed in a special account under the control of the inventor(s). There is a slightly different formula applied to cumulative net income over \$50,000: 1) 25% to the inventors as a group; and 40% to the inventor's department, but the rest of the distribution remains the same. ⁵¹⁰

In 2005, the Massachusetts Institute of Technology (MIT) had a research budget of over \$1 billion.⁵¹¹ Of that budget, \$60.5 million was from collaboration with private industry sponsors.⁵¹² Gross revenue for the same fiscal year was \$46 million, of which

⁵⁰⁷ Harvard University, Office of Technology Transfer Mission, *at* http://www.techtransfer.harvard.edu/MissionStatement.html (last visited Mar. 16, 2007).

See also, University – Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research. New York State Science and Technology Law Center, Syracuse College of Law, (Dec. 2006).

⁵⁰⁸ Harvard University, Office of Technology Transfer Mission, *at* http://www.techtransfer.harvard.edu/MissionStatement.html (last visited Mar. 16, 2007).

⁵⁰⁹ Techtransfer.Harvard.edu, Royalty Sharing Policy, *Available at*: http://www.techtransfer.harvard.edu/RoyaltySharing.html, (last visited Mar. 16, 2007).

⁵¹⁰ *Id*.

Massachusetts Institute of Technology, Office of Sponsored Programs, MIT Standard Consortium Agreement, Available at http://web.mit.edu/tlo/www/qfa.html (last visited Mar. 2, 2007).

⁵¹² *Id*.

royalties accounted for 75% (or \$35.3 million). ⁵¹³ Notably, MIT grants 20% of its licenses to startup companies. ⁵¹⁴

Royalty income received for a technology license is generally distributed after the Technology Licensing Office expenses and costs associated with filing, prosecuting, and maintaining patents have been deducted.⁵¹⁵ After these expenses have been deducted the inventor(s) receives one third, and the department receives the remaining two thirds of the royalty income.⁵¹⁶ Generally, money received by the department is then divided equally between the department and the MIT General Fund.⁵¹⁷

6.22 Michigan

6.22.1 University IP Policies

The public universities of Michigan do not have a uniform intellectual property policy; each university has its own. The public university system of Michigan is established under the Constitution of the state of Michigan. The Constitution provides that a corporate body govern the public universities; the Regents of the University of Michigan. The board consists of members from the University of Michigan, Michigan State University, and Wayne State University. A board from each institution has the

See also, University – Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research. New York State Science and Technology Law Center, Syracuse College of Law, (Dec. 2006).

⁵¹³ *Id*.

⁵¹⁴ Massachusetts Institute of Technology, Office of Sponsored Programs, MIT Standard Consortium Agreement, A*vailable at* http://web.mit.edu/tlo/www/qfa.html (last visited Mar. 2, 2007).

⁵¹⁵ Web.mit.edu, Guide to the Ownership, Distribution, Commercialization Development of M.I.T. Technology, *Available at*: http://web.mit.edu/tlo/www/community/guide4.html#4.1, (Last visited Mar. 13, 2007).

⁵¹⁶ *Id*.

⁵¹⁷ *Id*.

⁵¹⁸ MCLS Const. Art. VIII, § 5

⁵¹⁹ *Id*.

⁵²⁰ *Id*.

power of general supervision of the university and the control and direction of all expenditures from the institution's funds.⁵²¹

An example of a public university's intellectual property policy is that of the University of Michigan. The University of Michigan consistently ranks as a top university in the United States for research and development and therefore has a developed intellectual property policy. The policy is divided into several sections: ownership rights, disclosure, commercialization, revenue distribution, granting of rights back to inventors, appeals, conflicts of interest, and definitions. 523

Ownership of intellectual property made by any person with the direct or indirect support of University funds is granted to the University.⁵²⁴ The University will generally retain ownership of any intellectual property produced by employees while on any type of leave if they are receiving salary from the University, but some exceptions to this rule may be approved by the Vice President of Research.⁵²⁵ The University will generally not claim ownership of intellectual property created by a student unless it is created by a student in their capacity as an employee of the University or with direct or indirect support of University funds.⁵²⁶

To comply with federal law, employees of the University have an obligation to disclose any intellectual property promptly and completely to the University's Office of Technology Transfer (OTT). OTT has the ultimate authority regarding decisions concerning the route of commercializing or transferring intellectual property, including the usage of legal counsel and outside resources to assist the commercialization process.

⁵²⁵ *Id*.

⁵²⁶ *Id*.

⁵²⁷ *Id*.

⁵²¹ MCLS Const. Art. VIII, § 5

⁵²² Research and Development, available at: http://www.michigan.org/medc/ttc/ResearchAndDevelopment/ (last visited March 11, 2007)

⁵²³ University of Michigan Technology Transfer Policy, available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007)

⁵²⁴ *Id*.

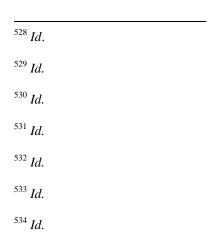
Revenue distribution generated by the licensing of University-owned intellectual property is intended to provide incentives for employee participation in the licensing process and to support further investment in research for the technology. After the recovery of University expenses, aggregate revenues are specified in the policy. It is generally expected that the revenue will be used for educational purposes or investment in commercialization activities. Sa0

The University may, at its discretion, elect to assign or license its rights in the University-owned intellectual property back to one or more of the inventors when permissible under University policies and state and federal laws.⁵³¹ If the University assigns ownership to the inventor, consideration of out-of-pocket University expenses, 15% of royalties, equity, or other value must be given to the University.⁵³² There is not a provision for the inventor to participate as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property.⁵³³

The University of Michigan's policy subjects the University and its employees to the Conflicts of Interest policies of the University and the State of Michigan Conflict of Interest Statute.⁵³⁴

6.22.2 Specialized Funding Agency IP Policies

Michigan recently created a fund for the development of intellectual property through the use of its share of tobacco settlement money. ⁵³⁵ The Governor of Michigan



⁵³⁵ State Leaders Highlight 21st Century Jobs Fund, available at: http://www.michigan.gov/som/0,1607,7-192-26847-130900--,00.html (last visited March 11, 2007)

signed an initiative into law in 2005: The 21st Century Jobs Initiative Program (the Fund). The purpose of the program is to create thousands of job opportunities in Michigan's increasingly high-tech economy. It is one of the largest programs in the state for technology innovation and the creation of intellectual property.

The Fund invests in research at state universities, non-profit research institutions, and the commercialization of products, processes, and services. The focus is on technologies in life sciences, alternative energy, advanced automotive manufacturing and materials, and homeland security and defense. In addition to funding research, the Fund is also permitted to invest in equity funds, qualified mezzanine funds, and qualified venture capital funds that will seek to create or retain jobs in Michigan. Lastly, the Fund can create commercial loan enhancement programs where a growth opportunity has been identified and for assisting small business owners.

The Fund does not contain a specific policy on intellectual property that is created through the financial support of the Fund. Most of the money disbursed goes to public universities and colleges in Michigan and are thereby governed by the university intellectual property policy in place. No specific intellectual property policy was found regarding intellectual property created through the use the Fund that is not created at a public university. Also, no intellectual property policies or rules regarding the recipients of the commercial loans were found. Lastly, no legislative bills seeking to reform policies or laws regarding intellectual policy were found.

⁵³⁶ *Id*.

⁵³⁷ 21st Century Jobs Fund Overview, available at: http://www.michigan.org/cm/attach/26DBE4B7-9637-4408-AE6C-E5C333AB5B32/21stCenturyOverview.pdf (last visited March 11, 2007)

⁵³⁸ *Id*.

⁵³⁹ *Id*.

⁵⁴⁰ *Id*.

⁵⁴¹ *Id*.

⁵⁴² *Id*.

6.23 Minnesota

6.23.1 University IP Policies

The Constitution of the State of Minnesota includes a University Charter.⁵⁴³ This University Charter provides that the government of the University is vested in a Board of Regents. The Board has the power and duty to enact laws for the University.⁵⁴⁴ As such, the Board of Regents has developed an intellectual property policy that applies to all public colleges and universities in the state of Minnesota.⁵⁴⁵

The intellectual property policy developed by the Board of Regents of Minnesota applies to all public universities in the state.⁵⁴⁶ The policy includes sections on: purpose, application, definitions, administrative procedures, university ownership and exceptions, use of intellectual property, income distribution, university responsibilities, individual responsibilities, and compliance.⁵⁴⁷

In terms of ownership, the University is the sole owner of intellectual property that is created at the facilities or by the use of funds allocated by the university by an employee in the scope of employment. Works created by a student fulfilling a course requirement are owned by the student, not the University. If a student is acting in an employee capacity for the University and creates intellectual property, ownership will vest in the University. 550

The policy also contains a provision for the distribution of income derived from intellectual property. 551 About 33% goes to the creator, about 33% goes to the Vice

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Minn. Con. Article 8 Sec 4
Id.
Id.
Intellectual Property Policy, available at: http://www1.umn.edu/regents/policies/academic/IntellectualProperty.pdf (last visited March 12, 2007)
Id.
Id.
Id.
Id.
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President of Research to support further research in the technology transfer office, 8 % goes to the creators department or school that supported the intellectual property, and about 25% goes to the department, division, or center that supported the research. The portion that goes to the department, division, or center, is to be spent directly on the inventor's further research or directly related work. Changes to this policy can be made by approval of the Vice President of Research in consultation with the Senate Committee on Research and the appropriate deans.

The University takes on the responsibility to oversee intellectual property and technology transfer management, establishing effective licensing procedures, promoting effective marketing and distribution of the intellectual property, and informing applicable individuals of the Policy.⁵⁵⁴ It is the responsibility of the individual to adhere to this policy, adhere to state, local, and federal laws applicable to intellectual property, and to promptly disclose intellectual property to the University.⁵⁵⁵ Failure to comply with the policy may result in disciplinary action of the employee by the University.⁵⁵⁶ The Minnesota Board of Regents subjects the University and its employees to the Conflicts of Interest policies of the University and the State of Minnesota Conflict of Interest Statute.⁵⁵⁷

6.23.2 Specialized Funding Agency IP Policies

No information found.

552 Id.
 553 Id.
 554 Id.
 555 Id.
 556 Id.

⁵⁵⁷ Id.

6.24 Mississippi

6.24.1 University IP Policies

All public universities within Mississippi are under the management and control of the Board of Trustees of State Institutions of Higher Learning. The duties of the board include the use, distribution and disbursement of all funds, maintenance or capital outlay expenditures of the institutions of higher learning, and several other duties. The public universities are thereby left to create their own intellectual property policies. Mississippi State University (MSU), for example, has developed its own intellectual property policy. The policy of MSU covers all forms of intellectual property. There is not a separate policy for patentable works as some universities have created.

The policy itself is divided into ten sections: definitions, intellectual property advisory committee, intellectual property policy applicability, assignment of rights, determination of rights in intellectual property, administrative procedures, appeals and conflicts, changes in policy, and development funds.⁵⁶³

When intellectual property is created through the use of MSU facilities or equipment, all employees are required to execute an assignment of rights for intellectual property to MSU. ⁵⁶⁴ In addition, students are required to assign the intellectual property rights to MSU in several different situations. ⁵⁶⁵ It includes situations when the student is an employee of MSU, holds a scholarship or fellowship through MSU under which the funding body imposes restrictions on intellectual property, a co-inventor with a party who

⁵⁵⁸Miss. Code Ann. § 37-101-1

⁵⁵⁹ *Id*.

⁵⁶⁰ Policy and Procedure Statement on Intellectual Property at Mississippi State University, available at: http://www.msstate.edu/dept/audit/7601.html#V. %20ASSIGNMENT%200F%20RIGHTS (last visited March 13, 2007).

⁵⁶¹ *Id*.

⁵⁶² *Id*.

⁵⁶³ *Id*.

⁵⁶⁴ *Id*.

⁵⁶⁵ *Id*.

is required to assign their intellectual property rights, or if they utilize proprietary know-how provided by a party required to assign their intellectual property rights to MSU, or if they are commissioned by MSU to assign their rights to the University. 566

Students and employees are required to assign the rights to MSU when the intellectual property is created in the general scope of employment or field of work and it is conceived through the use of MSU funding, facilities, resources, or time. Assignment of rights is also required when the intellectual property involves the use of MSU information that is not generally known to the public. Intellectual property created outside the scope of employment or that is made without the use of MSU funding, facilities, or time, does not require an assignment of rights to MSU. The intellectual property policy of MSU also includes an income distribution provision. The MSU policy does not contain a provision allowing the inventor to participate as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property.

Additionally, in 1992, the State of Mississippi enacted the Mississippi University Research Authority (MURA) law to promote the commercialization of intellectual property by lessening the rigidity of the conflict of interest issues that often occur. ⁵⁷¹ MURA was enacted to promote public welfare and prosperity in Mississippi by creating bonds between the public universities, business and industrial communities, and state government. ⁵⁷² The legislation provides for an officer or employee of a state university to apply to MURA, which has the power to grant permission to establish and maintain a

⁵⁶⁶ *Id*.

⁵⁶⁷ *Id*.

⁵⁶⁸ *Id*.

⁵⁶⁹ *Id*.

⁵⁷⁰ University of Michigan Technology Transfer Policy," Available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007)

⁵⁷¹ Objectivity in Research, available at: http://www.olemiss.edu/depts/research/office/policies/research_objectivity.html (last visited March 12, 2007)

⁵⁷² *Id*.

financial interest in a private entity that is receiving direct or indirect support from the University.⁵⁷³ The goal is to facilitate the transfer of the technology from the University to commercial and industrial ventures for economic gain in the state of Mississippi.⁵⁷⁴

In essence, the act essentially provides the legal framework for which University faculty and staff can commercialize their research. ⁵⁷⁵ It also establishes the working methods and legal associations that enable business participation. ⁵⁷⁶ In addition, the Act implements control and review procedures. ⁵⁷⁷ Lastly, the act encourages employee/faculty participation in commercializing the research.

The authority shall have the power to implement and further the purposes of the Mississippi University Research Authority Act including the power:

- (a) To lease, sell, exchange or transfer to a university or university research corporation personal property, money or other assets on terms and conditions established by the authority which are fair, just, and reasonable to the authority and the university involved and to enter into any other contract or agreement with the university research corporation or other private entity.
 - (b) To conduct, sponsor, finance and contract in connection with technological innovations of all kinds.
 - (c) To receive gifts, grants and donations of money, personal property or other assets of any kind from any source.
 - (d) To do anything else which the authority deems appropriate to further the purposes of the Mississippi University Research Authority Act. ⁵⁷⁸

⁵⁷³ *Id*.

⁵⁷⁴ *Id*.

⁵⁷⁵ University Policies Governing External Support, available at: http://www.usm.edu/spa/policies/policies-external.html (last visited March 12, 2007)

⁵⁷⁶ *Id*.

⁵⁷⁷ *Id*.

⁵⁷⁸ Objectivity in Research, available at: http://www.olemiss.edu/depts/research/office/policies/research_objectivity.html (last visited March 12, 2007)

In sum, the State of Mississippi has enacted a law to provide the legal framework for the commercialization of intellectual property for public college or university employees.

6.24.2 Specialized Funding Agency IP Policies

The State of Mississippi recently developed the Mississippi Technology Alliance (MTA).⁵⁷⁹ MTA is a non-profit organization with the purpose of creating economic development within the state by providing funding to small businesses with a high potential for growth in connection with public university or college in Mississippi.⁵⁸⁰

In February 2007, a bill providing more precise rules as to the program's funding and general polices was introduced into the legislature. The bill has several purposes. It is an act to establish the research and development program for making money available for small and medium sized Mississippi businesses with high growth potential that are engaged in research activities at a public college or university in Mississippi. It also provides funding to support capitalization of technology based businesses in rural parts of the state. It also provides that the programs established under the bill are under the direction of the MTA which established requirements and guidelines for the programs. The requirements and guidelines of the bill define who and what types of businesses are eligible for funding, the types of research that funding can be used for, as well as structures for paying back the funds received. In addition, ownership of rights in the intellectual property in various different situations is addressed.

⁵⁷⁹ 2007 Bill Text MS H.B. 1724

⁵⁸⁰ *Id*.

⁵⁸¹ *Id*.

⁵⁸² *Id*.

⁵⁸³ *Id*.

⁵⁸⁴ *Id*.

⁵⁸⁵ *Id*.

6.25 Missouri

6.25.1 University IP Policies

The public university system in Missouri is the University of Missouri, which encompasses four campuses in various cities in Missouri. The Constitution of Missouri grants the power to govern the public university system to a board of directors. The rules and regulations of the public university system have been codified. The rules pertaining to patents are codified in the Collected Rules and Regulations of the University of Missouri, section 100.020. The system is the University of Missouri, section 100.020.

Regulations on patents apply to all University employees and students, paid or unpaid, who make an invention within the general scope of duties as an employee of the University or as a student utilizing the University. Such students and employees are required to assign rights of ownership to the University of intellectual property created within their general scope of duties for the University. They are also required to disclose any and all applicable intellectual property to the University. ⁵⁹²

The policy also outlines a royalty and costs provision.⁵⁹³ The University pays all costs when it prosecutes a disclosed invention.⁵⁹⁴ The inventor receives about 33% of the gross royalty as personal income.⁵⁹⁵ After the expenses are offset, the campus where the intellectual property was created receives 1/3 of the net revenue, the inventor's academic

⁵⁹⁰ *Id*.

⁵⁹¹ *Id*.

⁵⁹² *Id*.

⁵⁹³ *Id*.

⁵⁹⁴ *Id*.

⁵⁹⁵ *Id*.

University of Missouri, available at: http://www.umsystem.edu/ (last visited March 19, 2007)
 Mo. Const. Art. IX, § 9(a)
 Collected Rules and Regulations of the University of Missouri, available at: http://www.umsystem.edu/ums/departments/gc/rules/business/100/020.shtml (last visited March 16, 2007)

⁵⁸⁹ *Id*.

department will receive 1/3 of the net revenue, and the University receives one third of the net revenue. See All royalty income to the University is reinvested into the research and patent program. The policy does not include a provision allowing creators of intellectual property policy to participate as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property. See

6.25.2 Specialized Funding Agency IP Policies

Missouri, like many other states, has an economic development program with the purpose of promoting business and innovation within the state.⁵⁹⁹ Missouri's program, the Missouri Economic Development Council (MEDC), is a statewide, not-for-profit association of economic developers.⁶⁰⁰ It was created in 1979 to promote and help fund programs for professional education, legislation, and marketing.⁶⁰¹ MEDC works closely with the Missouri Department of Economic Development to promote business in Missouri.⁶⁰² There is not a uniform policy for state funds received by MEDC regarding the ownership rights therein or royalty payment structures for the intellectual property that they create.

Also, an act was recently introduced in Missouri that created the Entrepreneurial Development Council within the Missouri Department of Economic Development. ⁶⁰³ The primary purpose of this newly created department within the state agency is to focus

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596 Id.
597 Id.
598 University of Michigan Technology Transfer Policy, available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007)
599 MEDC, available at: http://www.showme.org/ (last visited March 16, 2007)
600 Id.
601 Id.
602 Id.
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⁶⁰³ 2007 MO S.B. 631

on intellectual property matters.⁶⁰⁴ The Council will review intellectual property within the state, prosecute those who are infringing on the state's intellectual property, and review ownership rights of intellectual property created in the state, including that which is created within the University system.⁶⁰⁵ This bill was introduced in late February, 2007, and just introduced to a Senate committee in early March.⁶⁰⁶

6.26 Montana

6.26.1 University IP Policies

The Montana Board of Regents of Higher Education (MBRHE), created under Article X, Section (9) of the Montana Constitution, has adopted an inventions and patents policy applicable to all employees and units of Montana's University System. In summary, this policy provides that patentable inventions made by University employees as part of their assigned duties and/or by using University system facilities will be owned by the University. Under other circumstances, such as where University support is not significant, or where it is merely academic in nature, the inventor will own the invention.

The Montana University System patent policy also provides that inventions made pursuant to a sponsoring agreement will be governed by that agreement. 608 If ownership of the IP vests in the University, the inventor is entitled to receive 50% of net royalties from the invention.

A University employee, with approval from the Board of Regents, may have an equity interest in IP that he or she develops, and is permitted to serve as a director, officer, or employee of a business entity that has an agreement with the University system or another state agency relating to the IP.

⁶⁰⁴ 2007 MO S.B. 631

⁶⁰⁵ *Id*.

⁶⁰⁶ *Id*.

Montana Board of Regents of Higher Education Policy and Procedures Manual: Policy 401.2, Inventions and Patents, at http://bor.montana.edu/borpol/bor400/4012.htm (last visited March 12, 2007).

⁶⁰⁸ Id. at Section 5b.

6.26.2 Specialized Funding Agency IP Policies

State funding of R&D in Montana is governed by the Montana Board of Research and Commercialization Technology (MBRCT). The MBRCT provides that "[a]ll intellectual property rights, including any patents, copyrights, trademarks, and trade secrets developed by the funding recipient with use of funds provided by the Board, will be owned by the recipient or the recipient will have appropriate rights thereto as determined in consultation and agreement with the board."

6.27 Nebraska

6.27.1 University IP Policies

The Board of Regents of the University of Nebraska ("NU") is responsible for the authorization of research programs at the universities. NU has promulgated an IP policy that is applicable to all of its campuses and "any organization of the University whose primary purpose is to facilitate technology transfer and commercialization of the University's intellectual property." NU has also promulgated a "patent and technology transfer" policy and provided standard invention disclosure forms. Contracts with non-federal research sponsors are negotiated on a case-by-case basis." Research contracts sponsored by the federal government are "subject to statutes and regulations under which the University acquires title to inventions conceived or first reduced to practice in the performance of the research."

Montana Code Ann. 2-15-1819, See also http://businessresources.mt.gov/BRD_RCT.asp

⁶¹⁰ Montana Admin. Rule 8.100.111.

⁶¹¹ University of Nebraska Board of Regents Policy on Ownership of Intellectual Property (RP 4.4.1), at http://www.unl.edu/research/td/IP%20Policy.doc (last visited Apr. 20, 2007).

⁶¹² University of Nebraska Board of Regents Policy on Patent and Technology Transfer (RP 4.4.2), at http://www.nebraska.edu/board/RegentPolicies.pdf (last visited March 14, 2007).

⁶¹³ University of Nebraska Forms and Agreements, at http://www.unl.edu/research/td/forms.shtml (last visited March 14, 2007.

⁶¹⁴ University of Nebraska Board of Regents Policy on Ownership of Intellectual Property (RP 4.4.1), Section 7.0, at http://www.unl.edu/research/td/IP%20Policy.doc (last visited Apr. 20, 2007).

⁶¹⁵ *Id*.

6.27.2 Specialized Funding Agency IP Policies

Under Nebraska Revised Statute 81-1280, the Director of the Department of Economic Development may "acquire title on behalf of the State of Nebraska to any patent resulting from research projects conducted with funds of the Nebraska Agricultural Products Research Fund [NAPRF]." The Director may also, with approval from the governor, "grant licenses or otherwise dispose of a patent as he or she deems to be most favorable to the State of Nebraska." Any income derived from this activity must be paid into the NAPRF fund. 618

6.28 Nevada

6.28.1 University IP Policies

The University of Nevada, Las Vegas ("UNLV"), in conjunction with the Board of Regents of the Nevada System of Higher Education ("NSHE"), has adopted an IP policy in the context of sponsored R&D. Under Section 4, subsection 2(d) of that policy (entitled "Sponsor-Supported Efforts"), all research and consulting agreements must contain "Intellectual Property terms that are consistent with this Policy." These agreements may provide the sponsor with "an option to license any resulting Intellectual Property," and, "under limited circumstance," allow the sponsor to "obtain an option for an assignment of Intellectual Property, on terms to be negotiated by the Technology Transfer Office at UNLV." Where the sponsor agreement vests ownership rights in the NSHE, "the Inventor or author shall share in any Net Income received by UNLV under the terms of this policy."

⁶¹⁶ Neb.Rev.St. § 81-1280

⁶¹⁷ *Id*.

 $^{^{618}}$ 1d

⁶¹⁹ University of Nevada, Las Vegas Intellectual Property Policy, at http://www.unlv.edu/Research/about/about_policies_unlvip.html#sig (last visited March 14, 2007).

⁶²⁰ University of Nevada, Las Vegas Intellectual Property Policy, Section 4, subsection 2(d), at http://www.unlv.edu/Research/about/about policies unlvip.html#sig (last visited March 14, 2007)...

⁶²¹ *Id*.

⁶²² *Id*.

6.28.2 Specialized Funding Agency IP Policies

No information found.

6.29 New Hampshire

6.29.1 University IP Policies

The University of New Hampshire ("UNH") has adopted an IP Policy in the context of R&D⁶²³ that determines that the University owns all IP created by any person at the University unless some other legal obligation restricts ownership.⁶²⁴ Federally sponsored projects must follow 37 CFR 401.⁶²⁵

A UNH faculty or staff inventor may take an equity interest in a start up company, 626 and is also permitted to serve as an "officer, board member, or employee of the start-up company," but only under the "stringent adherence to the USNH/UNH conflict of interest policies." 627 Under these policies, UNH faculty and staff have an "obligation to scrupulously maintain the objectivity of their research so as to avoid any conflict of interest." 628

6.29.2 Specialized Funding Agency IP Policies

No information found.

⁶²³ University of New Hampshire Intellectual Property Policy No. VI-B-2.1, at http://www.unh.edu/osr/policies/support/intellectual_policy.pdf (last visited March 14, 2007).

⁶²⁴ University of New Hampshire Intellectual Property Policy No. VI-B-2.1, Section V(3), at http://www.unh.edu/osr/policies/support/intellectual_policy.pdf (last visited March 14, 2007).

⁶²⁵ *Id. at* Title 37, Part 401 of the Code of Federal Regulations is entitled "Rights To Inventions Made By Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements."

⁶²⁶ UNH Policy on Management of Equity Interests in Start-Up Companies, at http://www.unh.edu/users/unh/acad/ceps/orpc/equity.html (last visited April 4, 2007).

⁶²⁷ *Id*.

⁶²⁸ UNH Research Policies: Financial Conflict of Interest in Research, at http://usnholpm.unh.edu/UNH/VIII.Res/E.htm (last visited April 4, 2007).

6.30 New Jersey

6.30.1 University IP Policies

Rutgers, State University of New Jersey ("Rutgers") has adopted a patent policy in the context of R&D.⁶²⁹ Under the policy, ownership of patents arising from work sponsored by federal agencies is subject to the Bayh-Dole Act and other applicable law.⁶³⁰ Ownership of patents arising from work "funded by other external sponsors" is subject to "specific provisions contained in research proposals and agreements with those sponsors."⁶³¹

Rutgers has the right to form agreements involving equity.⁶³² The terms of such agreements and the distribution of income deriving from them must be "negotiated and reviewed by the appropriate authorities."⁶³³

6.30.2 Specialized Funding Agency IP Policies

No information found.

6.31 New Mexico

6.31.1 University IP Policies

New Mexico State University, which is governed by NM ST § 21-7-5, has an IP policy. The policy determines that all IP will belong to the originator, except if it was created by a University employee or through the use of significant University resources. New Mexico statutes also enumerate some of the powers of "research park corporations," which carryout and effectuate the provisions of the University Research Park Act. 635

⁶²⁹ Patent Policy of Rutgers, State University of New Jersey, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf (last visited April 4, 2007).

⁶³⁰ *Id.* at Section D.

⁶³¹ *Id*.

⁶³² Patent Policy of Rutgers, State University of New Jersey, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf, Section G (last visited April 4, 2007).

⁶³³ Patent Policy of Rutgers, State University of New Jersey, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf, Section G (last visited April 4, 2007).

⁶³⁴ Intellectual Property Policy & Procedures, New Mexico State University: Office of the Vice President for Research, available at http://research.nmsu.edu/docs/IP/intelPropPP.html.

6.31.2 Specialized Funding Agency IP Policies

In 2001, New Mexico enacted its "Patent and Copyright Act." ⁶³⁶ Under the act, "Inventions, innovations, works of authorship and their associated materials that are developed by a state employee, except an employee of a state educational institution, within the scope of his employment or when using state-owned or state-controlled facilities or equipment are the property of the state."

Under the Patent and Copyright Act, the Economic Development Department is required to (1) be responsible for the administration of the Act; (2) promulgate rules pursuant to the Act; (3) apply, on behalf of the state, for the patent protection or registration of copyright and pay the associated expenses; (4) share with the inventor, after expenses, fifty percent of the income collected on the invention or work; and (5) determine, after a cost-benefit analysis, whether to retain the patent or copyright for the state.⁶³⁸ The Act also created the "patent and copyright fund" in the state treasury.⁶³⁹

New Mexico has also statutorily created the "Technology Research Collaborative" with the purpose of creating and commercializing IP. IP created by an employee/agent of an associated institution shall be owned by that institution. IP created jointly will be owned jointly. If IP is created using federal funds, applicable federal laws (Bayh-Dohl) will govern ownership.

6.32 New York

Information on New York State Intellectual Property Policies is detailed in section 4.0 of the main report.

⁶³⁵ N.M STAT. ANN. § 21-28-6 (West 1998).

⁶³⁶ *Id*.

⁶³⁷ *Id*.

⁶³⁸ *Id*.

⁶³⁹ *Id*.

6.33 North Carolina

6.33.1 University IP Policies

The University of North Carolina, which is established and governed by NC ST § 116-3 and NC ST § 116-11, has an IP policy for patents and copyrights. The policy requires that all inventions be disclosed, at which point the University will decide either to commercialize the invention, dedicate it to the public domain, or waive any further University involvement.

According to the policy, inventions made by University personnel or students entirely on their personal time and not involving the use of University facilities or materials, are the property of the inventor unless an agreement with the University and federal or state government says otherwise.

6.33.2 Specialized Funding Agency IP Policies

No information found.

6.34 North Dakota

6.34.1 University IP Policies

North Dakota statutes⁶⁴² give the North Dakota State Board of Higher Education various powers to encourage collaborations between universities and private industry that foster technology transfer and promote the development of IP.

The University of North Dakota, which operates under Article 8, Section 6 of the North Dakota Constitution, has an IP policy for patents.⁶⁴³ Under the patent policy, the University will have sole and exclusive property of IP that results from its employees' and students' research if such research is conducted in the course of their employment or education with the University, or with the use of the University's resources.

⁶⁴⁰ UNC Intellectual Property Policies, THE UNIVERSITY OF NORTH CAROLINA, http://www.northcarolina.edu/content.php/aa/research/copyright/copyright.htm.

⁶⁴¹ Policies, Regulations & Rules: Patent Procedures, NC STATE UNIVERSITY, http://www.ncsu.edu/policies/research/POL10.00.1.php.

⁶⁴² N.D. CENT. CODE § 15-10-17 (2005).

⁶⁴³ UND Intellectual Property Policy, University of North Dakota Technology Transfer & Commercialization: Division of Research, http://www.und.edu/dept/ttc/ppund.html.

Once the rights to a new invention have been assigned to the University, the University has six months in which to evaluate the invention and decide whether or not to pursue a patent on it.⁶⁴⁴ If the University decides not to pursue a patent for the invention, then all rights to the invention revert to the inventor. If the University does decide to pursue a patent for the invention, then the University will pay the inventor "a minimum of 30 percent of the net royalties and fees received by the [University]."⁶⁴⁵

6.34.2 Specialized Funding Agency IP Policies

No information found.

6.35 Ohio

6.35.1 University IP Policies

Ohio University has a policy known as Procedure 17.001, and its purpose is "[t]o provide a policy governing the ownership of intellectual property and associated University employee responsibilities." ⁶⁴⁶

Under Procedure 17.001, all patentable inventions created at the University are the property of the University.⁶⁴⁷ The University strongly encourages inventors to "disclose all potential patentable intellectual property to the University."⁶⁴⁸ Once an invention is disclosed, the University will review the invention for commercialization potential, and will decide whether or not to pursue commercialization of the invention.⁶⁴⁹ If the University does decide to commercialize the invention, then it owns all rights to do so⁶⁵⁰ and will charge licensing fees to commercial entities, the profits from which will be split between the inventor and the University. If the University decides not to

⁶⁴⁸ *Id*.

⁶⁴⁹ *Id*.

⁶⁵⁰ *Id*.

139

⁶⁴⁴ Section 190: Employee Responsibility and Activities: Intellectual Property, NORTH DAKOTA STATE UNIVERSITY SBHE POLICY MANUAL, http://www.ndsu.nodak.edu/policy/190.htm.

⁶⁴⁵ *Id*.

⁶⁴⁶ Intellectual Property Ownership and Disposition, and Employee Involvement in Research Commercialization, OHIO UNIVERSITY, http://www.ohiou.edu/policy/17-001.html.

⁶⁴⁷ *Id*.

commercialize the invention, then the inventor, along with any other funding institutions, will have the right to commercialize the invention. ⁶⁵¹

Finally, Procedure 17.001 provides that all Tangible Research Property that is created as a result of the research is the property of the University. 652

The Ohio legislature has enacted laws governing the rights to discoveries and inventions resulting from certain state institutions. The laws provide that any rights to inventions, patents, or discoveries will be the sole property of a state college or university if they result from research conducted in the college or university, from the use of college or university resources, or from college or university employees acting within the scope of their employment. The college or university may retain, assign, license, transfer, sell, or otherwise dispose of, any and all rights to or interests in, inventions or patents which it owns or acquires.

6.35.2 Specialized Funding Agency IP Policies

Ohio statutorily created the "Third Frontier Commission" in its Department of Development. The commission administers money appropriated to it by the general assembly for research and commercialization, and any other purposes the commission designates. Included in the commission's powers are the powers to facilitate alignment of the state's science and technology programs, and to make grants and loans to individuals, public agencies, private companies or organizations, or joint ventures for any activities related to its purpose. Included in the commission's duties is the duty to make periodic strategic assessments (especially in biomedical research) of the types of state investments that would likely create jobs and business opportunities, and produce the most beneficial long-term improvements of the public health of Ohio citizens.

⁶⁵¹ *Id*.

⁶⁵² *Id*.

⁶⁵³ Ohio Rev. Code Ann. § 3345.14 (West 2000).

⁶⁵⁴ *Id*.

6.36 Oklahoma

6.36.1 University IP Policies

The Oklahoma State Regents for Higher Education was created by the Oklahoma Constitution, ⁶⁵⁵ and is statutorily required to establish a model policy that could be adapted by the governing Board of Regents for each institution within the Oklahoma State System of Higher Education ("the system"), regarding IP rights. ⁶⁵⁶

The Oklahoma State Regents for Higher Education is also required to establish IP policies for institutions within the system. ⁶⁵⁷ Institutions within the Oklahoma State System of Higher Education are statutorily required to report to the Oklahoma State Regents for Higher Education as requested, research activities funded by external entities or institutions, the results of which have generated new IP. ⁶⁵⁸ Such reports will not be confidential, but rather are subject to full disclosure under the Oklahoma Open Records Act.

The Board of Regents of the University of Oklahoma has developed an IP policy. The policy's objectives are to (1) maintain the University's academic policy of encouraging research, publication, and scholarship independent of potential gain from royalties or other income; (2) make patented materials created pursuant to University objectives available in the public interest under conditions that will promote their effective utilization and commercialization; and (3) provide adequate incentives and recognition to faculty and staff through proceeds derived from their creative works, trademarks, discoveries, and inventions. Regarding patents, the policy addresses ownership, revenue, asset management committee and policy, administration, disclosure, application, University patent committees, use of facilities, and background.

⁶⁵⁵ OKLA, CONST. ART. 13-A, § 2

⁶⁵⁶ OKLA. STAT. ANN. tit. 70, § 3206.03 (West 1998).

⁶⁵⁷ *Id*.

⁶⁵⁸ *Id*.

⁶⁵⁹ The Board of Regents of the University of Oklahoma, Intellectual Property Policy, www.cimms.ou.edu/ipou.pdf.

6.36.2 Specialized Funding Agency IP Policies

No information found.

6.37 Oregon

6.37.1 University IP Policies

Oregon statutes allow the State Board of Education, as well as school districts and education services, to acquire interests in $\rm IP.^{660}$

Oregon has a set of Administrative Rules Governing Intellectual Property
Regarding the Board of Higher Education, Relating to Inventions, License Agreements,
Educational and Professional Materials Development, Patents and Copyrights. 661
Included in the Rules is the general policy of the Board to expeditiously make available to the public the inventions and technological improvements that result from employees' research activities. All Board and institution employees must agree to assign to the Board all rights to inventions conceived of or developed using institutional resources. It is also the Board's responsibility to establish principles and procedures for sharing royalties with employees and, when required by agreement, with sponsoring agencies. 663
Oregon institutions are required to actively encourage the development of subject matter and material falling under these rules. The state also requires that the Office of Administration Responsibilities assist and monitor institutions in the development and

142

⁶⁶⁰ See Or. REV. STAT. ANN. § 326.520 (West 2003).

⁶⁶¹ See Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, Ch. 580, Div. 43, http://www.gsr.pdx.edu/technology/intellectual_property.html.

⁶⁶² Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, 580-43-06, http://www.gsr.pdx.edu/technology/intellectual_property.html. See also Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, 580-43-07, http://www.gsr.pdx.edu/technology/intellectual_property.html. (It is the Board's intent to provide a systematic means of bringing inventions, technological improvements and educational professional materials into the public domain, encourage development of new knowledge while protecting employees' academic freedom in publishing and developing inventions and improvements, and to establish principles regarding sharing royalty income with employees and sponsoring agencies in accordance with any agreements).

⁶⁶³ Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, 580-43-07, http://www.gsr.pdx.edu/technology/intellectual_property.html.

⁶⁶⁴ *Id*.

application of procedures implementing Board policies, and review and improve institutions' recommendations regarding the rights to innovations and improvements. 665

Oregon State University has an IP policy that governs research conducted at the University, 666 with a sample research agreement that it uses as a starting point for research negotiations with sponsors. The University "retains the right to publish and disseminate all work done under sponsored research projects and cannot accept or undertake any sponsored project." The University grants sponsors a "time-limited first right to negotiate an exclusive or nonexclusive royalty-bearing license," with exceptions for federally funded research, which is governed by the Bayh-Dole Act; and research sponsored by nonprofit organizations, universities, or state agencies.

6.37.2 Specialized Funding Agency IP Policies

No information found.

6.38 Pennsylvania

6.38.1 University IP Policies

Pennsylvania's Public School Code of 1949 established a state system of higher education, including state institutions, which fall within the state's university system. Pennsylvania State University has an IP policy "to establish appropriate policies for ownership and management of University intellectual property. The policy requires students, staff and employees to sign an IP Agreement. The policy also requires that all University personnel disclose all inventions developed using University resources, or within the scope of an employee's employment, to the Intellectual Property Office.

⁶⁶⁵ *Id*.

⁶⁶⁶ A Principles and Policies Guide for Sponsored Research, Oregon State University, http://oregonstate.edu/research/technology/policies/principles guide.htm.

⁶⁶⁷ *Id*.

⁶⁶⁸ *Id*.

^{669 24} PA. CONS. STAT. ANN. § 20-2002-A (West 1949)...

⁶⁷⁰ *Policy RA11 Patents and Copyrights (Intellectual Property)*, Pennsylvania State University, *available at* http://www.research.psu.edu/policies/academic.html.

Under statute, the Pennsylvania Department of Community and Economic Development of the Commonwealth ("department") may provide Keystone Innovation Grants to institutions of higher education to facilitate technology transfer. Grants to applicants cannot exceed \$250,000 per year, or \$750,000 ever, with a program cap of \$10,000,000.⁶⁷¹

6.38.2 Specialized Funding Agency IP Policies

The Department of Community and Economic Development of the Commonwealth, in conjunction with the Department of Health, is required to establish three regional biotechnology research centers. The purpose of the centers is to develop and implement biotechnology research projects which promote and coordinate research in the state. The centers sign agreements with the state, outlining the process for allowing access to and commercialization of IP, and the portion of biotechnology research center earnings which would be returned to the Health Account.

Pennsylvania requires that all discoveries and patentable inventions resulting from the work of the Commonwealth Mental Health Research Foundation, its employees, or recipients of its financial aid, are to be assigned as property of the Foundation. In accordance with this requirement, all Foundation employees and aid recipients must sign an agreement assigning all of their rights, title, and interest in any development or patent resulting from their employment or aid, to the Foundation. All royalties are paid to the Foundation.

6.39 Rhode Island

6.39.1 University IP Policies

The University of Rhode Island is created by Rhode Island statute⁶⁷⁴, and has an IP policy.⁶⁷⁵ The University's manual defines policy and procedures for dealing with IP

144

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^{671 12} PA, CONS. STAT. ANN. § 3705 (West 2004).

^{672 35} PA. STAT. ANN. § 5701.1703 (West 2001).

⁶⁷³ 62 Pa. Stat. Ann. § 1148.

⁶⁷⁴ R.I. GEN. LAWS § 16-32-1.

generated by University personnel, or offered to it by alumni or friends. The policy is intended to comply with federal law, and it discusses disclosure, methods of determining ownership, and procedures for obtaining IP protection. The policy also calls on the University of Rhode Island Foundation to play a role in the commercialization of resulting innovations, as well as in the safeguarding of royalty income, which it says is "a potentially important source of revenue for both the creator of the intellectual property and the University."

Regarding ownership, "The Board of Governors shall own and have all rights to any inventions, trademarks, trade secrets, and copyrights discovered, created, or developed by University personnel using University time, resources, facilities, or equipment, except as otherwise provided in [the University IP] policy." In making the ownership determination, the Board uses a decision-tree approach that considers, among other things, whether property was created using University support, and whether it was developed in the course of a University-administered sponsored research agreement. 677

6.39.2 Specialized Funding Agency IP Policies

No information found.

6.40 South Carolina

6.40.1 University IP Policies

South Carolina statutorily established the State Commission on Higher Education in 1976.⁶⁷⁸ The University of South Carolina's Office of Intellectual Property has established policies for IP development and technology transfer, both of which conform to the goals of the State Commission on Higher Education.⁶⁷⁹ The policy's objectives are

⁶⁷⁵ The University of Rhode Island, University Manual, Chapter 10, Administrative Procedures, *available at* http://www.uri.edu/research/tro/UManual1040.htm.

⁶⁷⁶ *Id*.

The University of Rhode Island, University Manual Appendix H, Figure 1, *available at* http://www.uri.edu/facsen/figureone.pdf.bin.

⁶⁷⁸ S.C. CODE ANN. §§ 59-103-10, 59-103-15.

⁶⁷⁹ University of South Carolina Office of Intellectual Property, Intellectual Property Policy and Procedures, http://www.ip.research.sc.edu/policy_new.shtml.

to help attract resources that may lead to IP development; provide services to faculty, staff, and students to enable them to identify and protect IP; facilitate the efficient transfer of technology from the University to the private sector; and promote local and national economic development.

The University's Intellectual Property Office (IPO) follows the mandates of the Bayh-Dole Act, which enables the University to retain the entire right, title, and interest in government funded inventions to universities and businesses operating with federal contracts for the purpose of further development and commercialization. Furthermore, the University also has an Intellectual Property Committee (IPC), which serves as the body from which the inventor or the IPO can obtain an impartial review regarding issues of ownership. ⁶⁸⁰

The University IP policy covers disclosure of IP, ownership, research that makes substantial use of University resources or facilities, activities that fall within the inventor's scope of employment, and work supported by funds that are administered through the University. ⁶⁸¹

The IPO is also responsible for choosing the most appropriate commercialization option, including: licensing to third parties; licensing with business entities in which an inventor holds an ownership or management interest; and reassignment of ownership to inventors if inventors wish to market, protect, and license the IP on their own with minimal University involvement. Where the University is owner of IP, it will distribute a substantial portion of net revenues to the faculty, staff, or student inventors/creators as personal income. Regarding equity investment and faculty/employee involvement in spin-off companies, the policy does allow the University to enter into license agreements with business entities in which the inventor/employee holds an ownership interest. Terms in such agreements may include royalty payment, equity interest, or a combination thereof. 683

⁶⁸¹ *Id*.

⁶⁸² *Id*.

⁶⁸³ *Id*.

⁶⁸⁰ Id.

South Carolina has enacted the Venture Capital Investment Act of South Carolina, ⁶⁸⁴ which was passed to increase the availability of equity, near-equity, or seed capital for emerging, expanding, relocating, and restructuring enterprises in the state, as well as to address the long-term capital needs of smaller firms. The Act also established the South Carolina Technology Innovation Fund, which is used to award small grants for the best creative ideas from South Carolina research universities' technology incubators.

6.40.2 Specialized Funding Agency IP Policies

No information found.

6.41 South Dakota

6.41.1 University IP Policies

South Dakota's Board of Regents oversees all higher education institutions within the state. The Board created a standard IP policy for all educational institutions in South Dakota.

All IP created using an educational institution's funds and resources, while in the course of employment, will be property of the institution. Ownership of IP created using outside sponsorship is subject to contract negotiations with individual educational institutions. If an educational institution commercializes an inventor's IP, the inventor receives fifty percent of all net revenues. If the institution accepts funding from an outside sponsor wishing to retain ownership of the IP, the contract must contain an exclusive option for the school to have first refusal of an exclusive license. 685

6.41.2 Specialized Funding Agency IP Policies

South Dakota enacted the Certified Beef Program to create standard rules for beef production and processing. State ownership and licensing of IP in relation to this program is administered by the Secretary of Agriculture.

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147

⁶⁸⁴ S.C. CODE ANN. § 11-45-10.

⁶⁸⁵ South Dakota Board of Regents Policy Manual, Appendix R, http://www.sdbor.edu/administration/policy_planning/agreements/COHE_Agree/documents/appendr.pdf (last visited 03/16/2007).

In 2004, South Dakota started the 2010 Initiative, calling for development of the state's research and technology infrastructure. ⁶⁸⁶ The 2007 Budget Briefing on Tourism and State Development includes funds dedicated to the creation of a unified IP policy at South Dakota's universities. ⁶⁸⁷ Under the 2010 Initiative, the Board of Regents was instructed to modify their IP royalty policy to increase inventor royalties on net revenues from 25% to 50%. ⁶⁸⁸

6.42 Tennessee

6.42.1 University IP Policies

Tennessee's higher education institutions are governed by the Tennessee Board of Regents. The Board created a standard IP policy for all institutions. Ownership of IP created using institution resources will belong to the Board unless the inventor and the Board agree otherwise. In the event that Federal funds are involved, disclosure must conform with Bayh-Dole requirements. Any income arising from commercialization of IP will first go to pay school expenses before it is shared with the inventor. Each institution can have its own income distribution policy but in no case can the inventor or creator receive less than forty percent of income realized from IP.

6.42.2 Specialized Funding Agency IP Policies

No information found.

148

⁶⁸⁶ 2010 Initiative, Action Steps, Goal 3 - Become a Recognized Leader in Research and Technology Development by 2010, http://www.2010initiative.com/Progress/Goal3.htm (last visited 03/16/2007).

⁶⁸⁷ South Dakota 2007 Budget, http://www.state.sd.us/bfm/budget/Rec07/SD_REC_BUDGET_FY07.pdf , (last visited 03/16/2007).

⁶⁸⁸ *Id*.

⁶⁸⁹ Tennessee Board of Regents Intellectual Property Policy, http://www.tbr.state.tn.us/general_counsel/ip/IP_Policy.htm (last visited 03/16/2007).

⁶⁹⁰ *Id*.

6.43 Texas

6.43.1 University IP Policies

"The [Texas] Legislature, which is given the duty and authority to provide for the maintenance, support, and direction of The University of Texas by Article VII, Section 10 of the Texas Constitution, has delegated the power and authority to administer The University of Texas System to the Board of Regents." Accordingly, the Texas Board of Regents promulgates policies within the University of Texas (U.T.) system, including rules and policies relating to IP. Equation 19.

- "Intellectual property either developed within the course and scope of
 employment of the individual or resulting from activities performed on U.T.
 System time, or with support of State funds, or from using any facilities or
 resources owned by the U.T. System or any of its institutions (other than
 incidental use) is owned by the Board of Regents."⁶⁹³
- If U.T. elects not to assert an ownership interest on an IP asset "the institution will offer the released intellectual property to the creator." 694
- Licensing costs, including costs of patent prosecution and costs to operate a
 technology transfer office, must be recaptured prior to any distribution of royalty
 income. The remainder of the royalty income is divided 50% to the creator(s) and
 50% to the U.T. System.⁶⁹⁵

In agreements with business entities relating to IP rights "the U.T. System may receive equity interests as partial or total compensation for the rights conveyed." Employees of the U.T. System may hold an equity interest, or serve as an officer or director, in a business entity relating to research, development, licensing or exploitation

⁶⁹¹ Texas Education Code Section 65.11 et seq.

⁶⁹² http://www.utsystem.edu/bor/rules.htm#A2

 $^{^{693}\} http://www.utsystem.edu/bor/rules/90000Series/90102\%202004\%2012\%2010\%2001.pdf$

⁶⁹⁴ *Id*.

⁶⁹⁵ *Id*.

⁶⁹⁶ Id.

of IP so long as there is an effective conflict of interest management plan approved by U.T. If actual conflict of interest is found, the employee may be required to divest the equity interest, terminate affected research, or terminate the business relationship."⁶⁹⁷

Additionally, as part of Texas' plan to stimulate and ensure economic growth, the Texas Higher Education Board was made the controlling entity for the Advanced Technology Program (ATP) and the Advanced Research Program (ARP). Both the ARP and ATP exist to stimulate in-state research, gain maximum funding dollars, and create research jobs. Texas has determined that IP is significantly intertwined with the goals of both programs. ⁶⁹⁸

As a subgroup of the ATP project, the Technology Development and Transfer Program (TDT) was created to support transferring technology created by the Texas Higher Education Coordinating Board⁶⁹⁹ from the higher education research system to the private sector.⁷⁰⁰ The program has been in place since March 2003.

Texas has kept track of IP activity through the ARP and ATP programs, which monitor patents filed, patents issued, copyrights registered, licensing and follow-on research funding. Furthermore, Texas has documented the economic impact of IP funding. The funding of the funding

⁶⁹⁷ *Id*.

⁶⁹⁸ ATP, ADT, and TDT Research Grant Programs, http://www.thecb.state.tx.us/reports/pdf/0760.pdf (last visited 03/16/2007)

⁶⁹⁹ The Texas Higher Education Coordinating Board has been made a coordinating entity for a considerable amount of state research, and it functions as an administrative body for grants, donations and gifts. Texas Education Code, Title 3, Chapter 61, Higher Education Coordinating Board.

⁷⁰⁰ THECB Chapter 14, Subchapter D, Technology Development and Transfer Program, http://www.thecb.state.tx.us/Rules/Tac3.cfm?Chapter_ID=14&Subchapter=D&Print=1 (last visited 03/16/2007).

⁷⁰¹ ARP Impact Study - Executive Summary, http://www.researchintexas.com/ARPImpactStudyExec.pdf (last visited 03/16/2007); ARP Impact Study - Full Report, p. 16-18, http://www.researchintexas.com/ARPImpactStudy.pdf (last visited 03/16/2007); ATP Impact Study - Executive Summary, http://www.arpatp.com/ATPImpactStudyExec.pdf (last visited 03/16/2007); ATP Impact Study - Full Report, p. 12-13, http://www.arpatp.com/ATPImpactStudy.pdf (last visited 03/16/2007).

⁷⁰² Quantifiable Outcomes of ARP/ATP Research Projects, http://www.thecb.state.tx.us/reports/pdf/0738.pdf (last visited 03/16/2007); Economic Impact of ARP/ATP, http://www.researchintexas.com/Impact.pdf (last visited 03/16/2007).

6.43.2 Specialized Funding Agency IP Policies

In 2001, Texas Governor, Rick Perry, issued Executive Order RP10 creating the Governor's Council on Science and Biotechnology Development. The Council's purpose was to secure more research funds, promote technology transfer, encourage collaboration between industry sectors and contribute to economic growth. The Council recommendations have been incorporated by the biotech industry cluster.

Texas created an industrial cluster model in October 2004, to focus development for six key industries: i) biotech, ii) energy, iii) advanced manufacturing, iv) information technology, v) petroleum and vi) aerospace. Each industry cluster is encouraged to work closely with state agencies and educational institutions for research, funding and employment. A comprehensive IP management policy has not yet been created by any cluster.

6.44 Utah

6.44.1 University IP Policies

The Utah System of Higher Education consists of 10 public colleges and universities governed by the Utah State Board of Regents, assisted by a local Board of Trustees. ⁷⁰⁶ The system includes two major research/teaching universities – the

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasBiotechnologyandLifeSciencesCluster.pdf (last visited 03/16/2007); Energy Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasEnergyCluster.pdf (last visited 03/16/2007); Advanced manufacturing Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasAdvancedTechnologiesandManufacturingCluster.pdf (last visited 03/16/2007); Info Technology Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasITCluster.pdf (last visited 03/16/2007); Petroleum Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasPetroleumRefiningandChemicalProductsCluster.pdf (last visited 03/16/2007); Aerospace Cluster Report,

 $http://www.texas industry profiles.com/PDF/twcClusterReports/Texas Aerospace and Defense Cluster.pdf \ (last visited 03/16/2007).$

151

⁷⁰³ Office of The Governor, Rick Perry, Executive Order RP10 - January 17, 2001 http://www.governor.state.tx.us/divisions/press/exorders/rp10 (last visited 03/16/2007).

⁷⁰⁴ Texas Industry Partner Web Pages, Locating Industry Partners by Industry Sector, http://www.texasindustryprofiles.com/apps/partners/search.asp (last visited 03/16/2007).

⁷⁰⁵ Texas Industry Profiles, http://www.texasindustryprofiles.com/ (last visited 03/16/2007); Biotech Cluster Report,

⁷⁰⁶ Utah System of Higher Education, available at: http://www.utahsbr.edu/col03a.html (last visited April 26, 2007).

University of Utah and Utah State University. Utah's higher education institutions are also part of Utah's Centers of Excellence (COE). Each COE is affiliated with an educational institution.⁷⁰⁷

The University of Utah, in conjunction with the University's Technology Transfer Office and the University of Utah Research Foundation, has outlined the following Patents and Inventions Policy. In general, the University of Utah will acquire and retain title "to all inventions, discoveries and improvements made as a result of University employment or research, or created through the use of time, facilities, equipment or materials owned or paid for by or through the University." The University of Utah Research Foundation is the instrument of the University that commercializes inventions through royalty agreements with external organizations. The University assigns to the University of Utah Research Foundation all rights to those patents that should be exploited. Any surplus funds realized by the Foundation from this activity are allocated to fund the research and education programs of the University."

The inventors' share of royalty income "shall normally be forty % of the first twenty-thousand dollars of net revenue, thirty-five % of the next twenty-thousand dollars of net revenue, and thirty percent of any additional net revenue received by the Research Foundation." "If the University/Foundation determines that it does not wish to cover the expenses required to obtain patent protection, the University/Foundation will permit the inventor to pay all such expenses and thereafter to share any royalty or other revenue with the inventor" on the basis of "sixty-five percent to the inventor and thirty-five percent to the University after the inventor has been reimbursed for patent expenses." "712"

⁷⁰⁷ Governor's Office or Economic Development, Find a Center by Cluster, http://goed.utah.gov/COE/clusters/index.html (last visited 03/16/2007).

⁷⁰⁸ Patents and Inventions Memo, available at: http://www.admin.utah.edu/ppmanual/6/6-4.html (last visited April 26, 2007).

⁷⁰⁹ *Id*.

⁷¹⁰ *Id*.

⁷¹¹ *Id*.

⁷¹² *Id*.

Similarly, Utah State University acquires and retains all rights to all creative works of its employees within the scope of their employment and works in conjunction with an Office of Technology Commercialization and the Utah State University Research Foundation. A monetary award of \$1,000 in total shall be distributed to the inventor(s) of an intellectual property upon which a patent is granted by the University. For licensed patents, deductions for expenses are taken from gross royalty income and remaining income is distributed among inventors, the University, and generating units, with inventors taking 40%-50% of the income after deductions. The university share is used to provide university-wide research support.

6.44.2 Specialized Funding Agency IP Policies

Much of Utah's IP is managed through economic development initiatives and technology commercialization. Utah has an industry cluster model which works in conjunction with defined COEs at the state's public and private higher education institutions. The industry clusters are: aerospace, defense and homeland security, competitive accelerators, energy and natural resources, financial services, life sciences, and software development and information technology. ⁷¹⁶ The Governor's Office of Economic Development (GOED) selects proposals and approves funding for each center. Aside from economic development, the centers also function in transferring technology into the marketplace and helping companies with the patent process. ⁷¹⁷

The Utah Science, Technology and Research initiative (USTAR) was created as an initiative of the Utah State legislature to bolster Utah's high-tech economy by

⁷¹³ Utah State University Policy Manual, available at: http://www.usu.edu/hr/policies/327.htm (last visited April 26, 2007).

⁷¹⁴ *Id*.

⁷¹⁵ *Id*.

⁷¹⁶ Governor's Office or Economic Development, Find a Center by Cluster, http://goed.utah.gov/COE/clusters/index.html (last visited 03/16/2007).

⁷¹⁷ Utah Economic and Business Review, July/August 2006, Volume 66 Numbers 7 & 8, http://www.business.utah.edu/humis/docs/organization_936_1169837721.pdf (last visited 03/16/2007).

investing in university research programs.⁷¹⁸ USTAR also acts as an entity connecting companies, entrepreneurs and researchers.⁷¹⁹ For FY 2007, the USTAR initiative amounts to nearly \$220 million⁷²⁰. No specific information was identified regarding USTAR's IP policies.

6.45 Vermont

6.45.1 University IP Policies

The University of Vermont (UVM) has its own IP policy and its own licensing department, the Office of Technology Transfer (OTT). The OTT publicizes available technologies and helps create licensing agreements with private users. 722

All IP, except for scholarly or creative works, created using UVM resources or by UVM employees acting within the scope their employment, will be owned by UVM. Net income from royalties arising from commercialization of IP will first go to pay any UVM costs. The inventor will receive 45% of subsequent royalties.

6.45.2 Specialized Funding Agency IP Policies

Vermont has decided to fund research and high-tech business development but has not focused on creating an IP policy. The state created the Vermont Technology Council to oversee science and technology planning. Aside from job creation and high-tech industry development, the council examined methods of funding research and technology transfer. As of August 2006, a goal was to create the Vermont Commercialization Fund to help commercialize promising research from the state's educational institutions (such as UVM).

⁷¹⁸ Utah Science, Technology, and Research Initiative, available at: http://www.ustar.usu.edu/ (last visited April 26, 2007).

⁷¹⁹ *Id*.

⁷²⁰ *Id*.

⁷²¹ University of Vermont Office of Technology Transfer, http://www.uvm.edu/~techtran/ (last visited 03/16/2007).

⁷²² University of Vermont Office of Technology Transfer, Corporate Visitors Site, http://www.uvminnovations.com/ (last visited 03/16/2007).

The Experimental Program to Stimulate Research (EPSCoR) is a private non-profit organization which works with the University of Vermont and other private and public higher education institutions to provide access to research funding.⁷²³

6.46 Virginia

6.46.1 University IP Policies

The University of Virginia was founded in 1819 by Thomas Jefferson. Patents and Copyrights at "The University" are vested in the University of Virginia Patent Foundation. The Patent Foundation seeks to commercialize and receive royalties from patents created by The University's faculty and students, and to reinvest the royalties back into research. The University's patent policy uses a sliding scale to determine proportional royalties. According to the scale, inventors may be entitled to anywhere from 15% of the royalty yield (for inventions yielding more than \$1,000,000), to 40% of the royalty yield (for invention yielding less than \$100,000). The school and the scholarly activities fund receive from 0% to 20% and 10% respectively. University employees must disclose all conflicts of interest, though employees receiving a consulting or other fee of \$10,000 or more per year, and who either have no authority or disqualify themselves from negotiating the contract for either party, do not have a conflict.

⁷²³ Vermont Experimental Program to Stimulate Competitive Research, http://www.uvm.edu/EPSCoR/index.php?ContentID=27 (last visited 03/16/2007).

⁷²⁴ Short History, http://www.virginia.edu/uvatours/shorthistory/# (last visited April 6, 2007)

⁷²⁵ *Main*, at http://www.uvapf.org/ (last visited March 19,2007)

⁷²⁶ *Id*.

⁷²⁷ Vice President for Research and Public Service, *Patent Policy*, at http://www.virginia.edu/finance/polproc/pol/xve2.html (last visited March 19,2007).

⁷²⁸ Id.

⁷²⁹ Resolution of conflicts of interest as they relate to research contracts, http://www.virginia.edu/finance/polproc/pol/viiib1.html (last visited April 18, 2007)

the need for a fair license to all parties.⁷³⁰ The University will support the license as far as this assists its academic mission, and any equity position in the start-up company licensee will be passive and non-managerial.

6.46.2 Specialized Funding Agency IP Policies

Virginia has a number of research funding agencies, with an executive official responsible for helping to develop and commercialize IP in the state. The Secretary of Technology is responsible to the Governor of Virginia for the following state agencies: Information Technology Investment Board, Innovative Technology Authority, Virginia Information Technologies Agency, Virginia Geographic Information Network Advisory Board, the Wireless E-911 Services Board, and the Virginia Research and Technology Advisory Commission.

The Joint Committee on Technology and Science is a permanent legislative agency of Virginia. It is comprised of members of both legislative houses, and issues reports on specific issues in Technology and Science. The Virginia Information Technology Agency and Virginia Information Technologies Investment Board are the state entities responsible for investment in information technology in the state. The Board is headed by a Chief Information Officer (CIO), and is charged with prioritizing investment in IT throughout the state.

The Virginia Research and Technology Advisory Commission advises the Governor of Virginia on issues related to Research and Technology within the state, with

⁷³⁰ Patent Foundation Guidelines for Licensing to Faculty Start-ups, http://www.uvapf.org/resources/policies/index.cfm/fuseaction/viewpage/page_id/100?CFID=1691298&CF TOKEN=77749068& (last visited April 18, 2007)

⁷³¹ Virginia Stat. §2.2-225

⁷³² *Id*.

⁷³³ Virginia Stat. §30-86

⁷³⁴ Virginia Stat. §2.2-2005

⁷³⁵ *Id*.

an emphasis on policy recommendations designed to enhance competitiveness in research and commercial technology.⁷³⁶

6.47 Washington

6.47.1 University IP Policies

Washington has two large research universities: Washington State University (WSU) and the University of Washington (UW). This section will address IP policies in place at both WSU and UW.

Washington State University (WSU) is a large research university⁷³⁸ founded in 1861.⁷³⁹ The entity in charge of its tech transfer activities is the WSU Research Foundation (WSURF).⁷⁴⁰ The WSU Office of Intellectual Property Administration (OIPA) makes the determination of whether patent protection will be sought following disclosure of an invention by a WSU Faculty member.⁷⁴¹ It is the stated policy to offer the federal government the opportunity to patent an invention if OIPA does not want it.⁷⁴² After IP protection is sought, and once a possible licensing partner is located, the IP will then be assigned to WSURF, which manages and licenses it.⁷⁴³ Revenue for patented inventions is shared with inventors on a slide scale. Policy promulgated pursuant to State Ethics statutes states that: "No state officer or state employee may employ or use any person, money, or property under the officer's or employee's official control or direction,

⁷³⁶ Home, http://www.cit.org/VRTAC/index.html (last visited April 6, 2007).

⁷³⁷ Washington Colleges and Universities, http://www.hecb.wa.gov./Links/colleges/collegesindex.asp (last visited April 18, 2007).

⁷³⁸Profile of Washington State University, at http://www.wsu.edu/future-students/why-wsu/wsu-profile/profile.html (Last visited March 19, 2007).

⁷³⁹ *The Need for New Campus*, http://www.lib.washington.edu/exhibits/site/decision.html (last visited April 6, 2007)

⁷⁴⁰ WSU Research Foundation, at http://webproofs.wsu.edu/wsurf/public/index.html (last visited March 19, 2007.

⁷⁴¹ *OIPA Process*, at http://webproofs.wsu.edu/wsurf/public/Inventors/oipaprocess.html (last visited March 19, 2007).

⁷⁴² *Id.*..

⁷⁴³ *Id*.

or in his or her official custody, for the private benefit or gain of the officer, employee, or another."⁷⁴⁴

Tech transfer is handled by UW Tech Transfer.⁷⁴⁵ After deducting administrative and legal costs, the University of Washington shares revenue derived from patents by giving one-third to the inventor, one-third to the inventor's department or college, and one-third to the University's research funds.⁷⁴⁶ In 2006, of 310 disclosed inventions at the University of Washington, 153 commercialization agreements were completed, and 151 patent applications were submitted, resulting being 23.5 million dollars in royalty revenue for the University.⁷⁴⁷

The University of Washington Patent Policy allows for the granting of exclusive licenses to private industry partners. While University employees are allowed to consult with industry partners, they are specifically advised to avoid conflicts of interest. Conflicts would arise if "the faculty member owns stock in the company, holds a management position in the company, has a continuing role in the scientific program of the company, or also receives research funding from the organization."

6.47.2 Specialized Funding Agency IP Policies

The Washington Apple Commission is a specialized state agency designed to promote the apple industry in Washington State. Among its duties, it conducts

158

⁷⁴⁴ Intellectual Property Policy, http://webproofs.wsu.edu/wsurf/public/SectionIVF-IWSUFacultyManual.pdf (last visited April 6, 2007)

⁷⁴⁵ http://depts.washington.edu/techtran/tt/About_Us/Fast_facts3-4.pdf

⁷⁴⁶ *Technology Transfer 5. Licensing Revenue*, http://www.washington.edu/admin/rules/APS/59.04.5.html (last visited April 6, 2007)

⁷⁴⁷ UW Research Economic Impact, http://www.washington.edu/research/economic.html (last visited April 6, 2007)

⁷⁴⁸ Patent, Invention, and Copyright Policy, at http://www.washington.edu/faculty/facsenate/handbook/04-05-07.html (last visited March 19, 2007).

⁷⁴⁹ Technology Transfer 5. Relationships with Industry, http://www.washington.edu/admin/rules/APS/59.04.5.html (last visited April 6, 2007)

⁷⁵⁰ West's RCWA 15.24.070

research into the benefits of apples⁷⁵¹ and is charged with acquiring IP rights from funded research, and licensing and commercializing IP as appropriate.⁷⁵²

The Life Sciences Discovery Fund is a special fund created via money from the state's tobacco lawsuit settlements. Periodic reports are to be made to the state legislature on the return on the state's investment in research, including acquired IP.

The Washington legislature has established the "Investing in Innovation Grants Program," which focuses on the creation and commercialization of IP in the telecommunication, energy, and technology sectors⁷⁵⁵.

6.48 West Virginia

6.48.1 University IP Policies

West Virginia University's (WVU) office of Tech Transfer policy is to take the patent to any technology developed on its campus. The University retains the discretion to transfer patents or other IP rights, including the rights to inventions not yet created, to private actors. The University provides a \$100 award for each invention disclosure, and shares royalty revenue with the inventor in a 30/10/10/50 split between the inventor/inventor's department/inventor's college/the University as a whole. The University requires that its personnel do not act against the interests of the University. Acts against the interest of the University would include situations such as signing a

⁷⁵¹ West's RCWA 15.24.070(6)

⁷⁵² West's RCWA 15.24.070 (14)

⁷⁵³ West's RCWA 43.350.070

⁷⁵⁴ *Id*.

⁷⁵⁵ West's RCWA 28B.20.283

⁷⁵⁶ WVU Office of Tech Transfer IV. Patent Policy, at http://www.wvu.edu/~research/techtpatent.html (last visited March 19, 2007).

⁷⁵⁷ *Id*.

⁷⁵⁸ *Id*.

⁷⁵⁹ *Id*.

patent agreement that abrogates the rights of the University, or using the name of the University to promote an invention without prior permission. ⁷⁶⁰

6.48.2 Specialized Funding Agency IP Policies

The West Virginia Development Office is responsible for attracting new science and technology industries, and expanding existing technology by obtaining research grants. It also reviews the findings of the Center of Regional Progress, the Center for Economic Research, the Institute for International Trade Development and the West Virginia Foundation for Science and Technology. ⁷⁶²

The West Virginia Academy of Science and Technology was formed to foster "educational and economic development," which the legislature said "require an integrated program of support for research and development, assistance in the transfer of technological innovations and discoveries to public and private enterprises and facilitation of the commercialization of intellectual property." The Academy is required to make periodic reports about the state of IP development in West Virginia. ⁷⁶⁴

Finally, purchases directly related to Research and Development, including the costs associated with investigating, acquiring or purchasing a patent, are exempt from taxation by the State of West Virginia.⁷⁶⁵

6.49 Wisconsin

6.49.1 University IP Policies

The large University of Wisconsin system has a universal patent policy, which mandates disclosure of all inventions made by faculty or staff. The individual

⁷⁶⁵W. Va. Code, § 11-15-9b.

⁷⁶⁰ *Id*.
⁷⁶¹ W. Va. Code, § 18B-13-3.
⁷⁶² W. Va. Code, § 18B-13-3(B).
⁷⁶³W. Va. Code, § 5B-2C-1.
⁷⁶⁴W. Va. Code, § 5B-2C-6.

⁷⁶⁶Financial Administration Patent Policy (G34), at http://www.uwsa.edu/fadmin/gapp/gapp34.htm (last visited March 19, 2007).

universities within the system are empowered to assign the rights to a patentable invention to themselves or to a designated nonprofit management organization, such as the UW-Madison Alumni Research Foundation (WARF). WARF has an extensive framework for disclosure, patenting, and commercialization and an unusual revenue sharing arrangement, which includes sharing of the gross royalty payment. WARF also provides resources for faculty and staff seeking to spin out a start up company using technology licensed from WARF, including a policy of "standing still" in outside licensing efforts when a University professor seeks to establish a spin-off.

A subsidiary of WARF is WiSYS, which functions as the Tech Transfer foundation for the universities other than UW Madison.⁷⁷¹

6.49.2 Specialized Funding Agency IP Policies

W.S.A. 560.62 permits the Wisconsin Department of Commerce to provide grants to Wisconsin businesses or business/education consortia to help create new, or improve existing, industrial products. The statute conditions the granting of such money on the creation of an explicit agreement as to patent and license ownership, dissemination of information to the public, and the responsibilities of the party conducting the research.⁷⁷² It does not appear on its face to be created so as to provide a proprietary interest for Wisconsin in IP that is generated with the funding.

The Wisconsin Aerospace Authority is a state agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP. The agency established to promote the creation of IP. The agency es

⁷⁶⁷ *Id*.

⁷⁶⁸ Disclosing to Warf, http://www.warf.org/inventors/index.jsp?cid=14&scid=8 (last visited April 6, 2007)

⁷⁶⁹ *RoyaltyDistribution*, http://www.warf.org/inventors/index.jsp?cid=14&scid=8 (last visited April 6, 2007)

⁷⁷⁰ Start-ups, http://www.warf.org/inventors/index.jsp?cid=16 (last visited April 6, 2007)

⁷⁷¹ About us, at http://www.wisys.org/aboutus/ (last visited March 19, 2007).

⁷⁷² W.S.A. 560.62

⁷⁷³ W.S.A. 114.60

⁷⁷⁴ W.S.A. 114.62 (10)(d)

6.50 Wyoming

6.50.1 University IP Policies

The University of Wyoming was established by the Wyoming Constitution in 1880.⁷⁷⁵ Tech Transfer is handled by the University of Wyoming Research Products Center.⁷⁷⁶ The University reserves the right to all inventions made on its property, with the exception of those made on the "personal time" of staff.⁷⁷⁷ The definition of "personal time" excludes any activities done on University premises.⁷⁷⁸ Net revenue from licensed inventions is shared by distributing 60% to the inventor, 20% to the inventor's department, and 20% to the University's research fund.⁷⁷⁹ Prior to signing a consulting agreement that will require the use of university property or disclosure of University IP, a University employee is instructed to notify the research advisory committee and obtain a waiver of the University's rights, or otherwise alter the agreement to make it conform with University policy.⁷⁸⁰

6.50.2 Specialized Funding Agency IP Policies

The University of Wyoming and the Wyoming Business Council (WBC) have a joint project called the Wyoming Small Business Innovation Research and Technology Transfer Programs (WSSI).⁷⁸¹ These programs seem designed to assist Wyoming businesses with applying for federal grants from specific agencies. They also fund Wyoming businesses through the Phase 0 process prior to Phase 1 application to a federal agency, granting each small business up to \$5,000.⁷⁸² According to WSSI, Wyoming

⁷⁷⁵ Wyo. Const. Act of Admission §8.

⁷⁷⁶ Wyoming Technology Transfer, at http://uwadmnweb.uwyo.edu/rpc/default.asp (last visited March 19, 2007).

University Regulations 641, Revision 3: Patents and Copyrights (7), at http://uwadmnweb.uwyo.edu/legal/uniregs/ur641.htm (last visited March 19, 2007).

⁷⁷⁸ *Id*.

⁷⁷⁹ *Id*.

⁷⁸⁰ *Id*.

⁷⁸¹ About, at http://uwadmnweb.uwyo.edu/SBIR/about.html (last visited March 19, 2007).

⁷⁸² *Id*.

residents have received at least \$21 million via the federal programs.⁷⁸³ Wyoming does not appear to claim any proprietary rights in any IP so created.

The Wyoming Technology Transfer Center is a program funded by the Federal Highway Administration, in cooperation with the University of Wyoming, the Wyoming Transportation Department, and Wyoming localities.⁷⁸⁴ It assists Wyoming state agencies and individuals by, amongst other things, disseminating information about new technology related to transportation, such as road design, construction, and maintenance.⁷⁸⁵

7 New York State Intellectual Property Policy Alternatives

8 Conclusion

⁷⁸³ *About*, at http://uwadmnweb.uwyo.edu/SBIR/about.html (last visited March 19, 2007).

⁷⁸⁴ WyT²/LTAP Center, http://www.eng.uwyo.edu/wyt2/ (last visited April 18, 2007).

⁷⁸⁵ *Id*.

Appendices

Appendix A—Private Causes of Action Under the Bayh-Dole Act: Case Briefs

A.1 Service Engineering Corporation v. United States Department of Agriculture

In this case, the USDA, a government agency filed notice to grant an exclusive license on a government patent to one company, but then gave the license to another company. The USDA then extended the term of that patent. Service Engineering filed an application for a non-exclusive license in the patent, but their application was rejected. Service Engineering sued to have their application reconsidered and both parties filed motions for summary judgment. The USDA contended that Service Engineering lacked standing to sue. Specifically, USDA asserted that Service Engineering demonstrated no actual injury resulting from the USDA's actions and that Service Engineering's interests do not fall within the zone of interests protected by Bayh-Dole.

The court agreed with the USDA that the goal of the Bayh-Dole Act is to "secure the public good of commercial exploitation of patents on inventions which result from government funded research." The court specifically rejected Service Engineering's position that the Act was intended to protect individuals, including corporations, from the "anticompetitive effects of government licensing policies." Rather, the Act anticipates and encourages such anticompetitive effects since it permits exclusive licensing. The court found no evidence that Congress intended to protect the specific economic interests in competition with government licensees. Therefore, Bayh-Dole vests federal agencies with essentially complete discretion in deciding whether to grant or deny a license in a federally patented invention. ¹

In conclusion, the purpose of the Bayh-Dole act is to promote the utilization of inventions arising from federally supported research and development. Bayh-Dole was not intended to protect the interests of parties in competition with government licensees. Lastly, Bayh-Dole was not intended by Congress to protect the interests of parties who

¹ 35 U.S.C.S. § 207(a)(2).

voluntarily fail to participate in an agency's patent licensing process so as to confer standing challenge the agencies decisions.

A.2 Platzer, et. al. v. Sloan-Kettering Institute for Cancer Research

Doctors E. Platzer, K. Welte, and R. Mertelmann (Plaintiffs) sued to recover a share of the royalties from a discovery they made while in the employment of Sloan-Kettering for Cancer Research (Defendant). The Defendant is a not-for-profit corporation engaged in scientific research largely funded by the federal government. The Defendant moved to dismiss the complaint for lack of subject matter jurisdiction and failure to state a claim under which relief can be granted.² The motion to dismiss was granted.

The Plaintiffs asserted that Sloan-Kettering was obligated to share royalties with inventors.³ Additionally they allege that even though the act does not indicate any particular percentage of royalties that an institution must pay its inventors, legislative history makes it clear that Congress intended the share to be greater than 15%.

Sloan-Kettering moved to dismiss the first three causes of action asserting that the court lacked subject matter jurisdiction.⁴ Also, Sloan-Kettering claims that Plaintiffs did not state a cause of action because no private right of action exists.⁵ Sloan-Kettering argued these claims should be dismissed, the court should decline to exercise supplemental jurisdiction over the state law claims, or should dismiss them for failing to state a claim for which relief can be granted.

The court concluded that the claims did arise under the laws of the United States, and that subject matter jurisdiction did exist. However, they found that the claim should be dismissed for failure to state a cause of action for which relief can be granted.⁶

The court found that Congress did not intend for a private cause of action.⁷ To determine if a private cause of action exists under a federal statute, the courts will

³ 35 U.S.C. 202(c) (7) (B).

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² F.R.C.P. 12 (b)(1)(6)

⁴ 28 U.S.C 1331 and 1338(a)

⁵ 35 U.S.C. 202 (c) (7) (B)

⁶ F.R.C.P 12(b) (6)

consider four factors: (1) whether plaintiff is part of the class for whose benefit the statute was passed; (2) whether the legislative history indicates Congressional intent to confer a private right of action; (3) whether a federal cause of action would further the underlying purpose of the legislature; and (4) whether the plaintiffs cause of action is traditionally subject to state law.⁸

The court found that the Plaintiff was not a member of the class for whose benefit that statute was enacted. The court found that legislative history did not indicate intent to create a private right action because the legislative history is completely silent as to this issue. Lastly, the court found that allowing such a right would not further the purpose of the statute. The Bayh-Dole act was intended to further the development of the commercialization of government funded research. A private right of action allowing an inventor to demand 50% of the royalties would frustrate this purpose, not further it. Therefore, the first cause of action was dismissed for failing to state a claim for which relief can be granted.

The court next looked to determine if the second and third claims were "sufficiently substantial" to confer "arising under" jurisdiction. To determine this, the court looked to the language of the statute. "Each funding agreement with a... non-profit organization shall contain appropriate provisions to effectuate... a requirement that the contractor share royalties with the inventor."

The Plaintiffs argued that the institutions are required to share a specific percentage with inventors and scientists. The court was unable to find anything in the language or the legislative history to suggest this assertion. The purpose of the Bayh-Dole Act is to "promote the utilization and commercialization of inventions made with government support." The court ruled that Congress' concern was with the

⁷ 35 U.S.C. 202 (c) (7) (B)

⁸ *Id*.

⁹ 35 U.S.C. 209 (c)(1)

¹⁰ *Id*.

¹¹ 35 U.S.C. 202(c) (7) (B)

¹² 35 U.S.C. 202(c) (7) (B)

reinvestment of funds to further research and the provision requiring the institutions share royalties with the inventors was provided merely to ensure that inventors were given adequate incentive to engage in the research. The second and third claims were also dismissed. Since all federal claims were dismissed, the court declined supplemental jurisdiction of the remaining state law claims under contract and unjust enrichment theories.¹³

In conclusion, the language of the statute, legislative history, and agency regulations failed to suggest that Congress intended to set minimum sharing ratios or minimum shares upon the institutions conducting the research. Therefore, no private cause of action exists under the provision of Bayh-Dole granting nonprofit organizations exclusive title to inventions developed through federal funding and requiring that such federal contractors share specified percentages of royalties with the inventor.¹⁴

¹³ 28 U.S.C 1367 (c)(3)

¹⁴ 35 U.S.C. 202(c) (7) (B)

Appendix B—AUTM Data

B.1 AUTM Survey by State

B.1.1 2003 AUTM Survey by State

State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New US Patent Applications Filed	Start-up Companies Formed	US Patents Issued	License Income Received	Licenses and Options Executed
California	\$1,110,994,800	\$117,832,782	\$454,497,873	\$1,683,325,454	2024	1081	47	643	\$132,575,435	452
Florida	\$811,695,736	\$86,088,942	\$332,057,346	\$1,229,842,024	507	356	13	117	\$61,458,737	87
Georgia	\$697,264,409	\$73,952,286	\$285,244,531	\$1,056,461,225	426	210	14	116	\$29,307,690	148
Illinois	\$949,532,987	\$100,708,044	\$388,445,313	\$1,438,686,344	469	260	9	137	\$13,316,703	130
Massachusetts	\$1,545,475,089	\$163,914,025	\$632,239,809	\$2,341,628,923	939	486	23	267	\$65,996,810	267
Michigan	\$867,725,428	\$92,031,485	\$354,978,584	\$1,314,735,497	404	198	11	114	\$45,945,506	118
Minnesota	\$335,647,620	\$35,598,990	\$137,310,390	\$508,557,000	218	72	4	54	\$37,492,778	56
New York	\$1,255,779,290	\$133,188,713	\$513,727,891	\$1,902,695,894	773	442	25	177	\$132,491,038	137
North Carolina	\$824,049,085	\$87,399,145	\$337,110,989	\$1,248,559,219	570	308	16	152	\$30,690,184	183
Texas	\$1,394,421,405	\$147,893,179	\$570,445,120	\$2,112,759,705	744	328	20	144	\$32,921,311	275
Washington	\$595,323,629	\$63,140,385	\$243,541,485	\$902,005,499	237	96	3	61	\$29,441,316	72
Wisconsin	\$537,943,525	\$57,054,616	\$220,067,806	\$815,065,947	452	166	2	90	\$38,318,538	195
Sum	\$10,925,853,002	\$1,158,802,591	\$4,469,667,137	\$16,554,322,731	7763	4003	187	2072	\$649,956,046	2120
Average	\$910,487,750	\$96,566,883	\$372,472,261	\$1,379,526,894	647	334	16	173	\$54,163,004	177

B.1.2 2004 AUTM Survey by State

State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New US Patent Applications Filed	Start-up Companies Formed	US Patents Issued	License Income Received	Licenses and Options Executed
California	\$1,194,386,639	\$124,786,664	\$463,493,323	\$1,782,666,625	2222	1447	35	528	\$134,646,970	468
Florida	\$911,824,270	\$95,265,222	\$353,842,254	\$1,360,931,746	599	429	15	149	\$54,156,280	96
Georgia	\$778,994,483	\$81,387,483	\$302,296,367	\$1,162,678,333	499	421	20	81	\$33,148,537	137
Illinois	\$1,022,676,815	\$106,846,831	\$396,859,660	\$1,526,383,306	530	291	17	106	\$16,355,305	139
Massachusetts	\$1,056,073,652	\$110,336,053	\$409,819,626	\$1,576,229,331	1014	580	35	255	\$72,488,379	260
Michigan	\$897,233,888	\$93,740,854	\$348,180,315	\$1,339,155,056	539	248	23	135	\$50,167,870	145
Minnesota	\$345,090,870	\$36,054,270	\$133,915,860	\$515,061,000	224	83	3	38	\$45,550,764	100
New York	\$1,410,244,352	\$147,338,962	\$547,259,002	\$2,104,842,317	873	491	29	164	\$170,278,933	207
North Carolina	\$886,098,770	\$92,577,483	\$343,859,224	\$1,322,535,478	568	277	21	129	\$47,250,115	178
Texas	\$1,172,929,389	\$122,544,862	\$455,166,629	\$1,750,640,879	622	362	18	151	\$28,664,437	177
Washington	\$642,535,324	\$67,130,556	\$249,342,066	\$959,007,947	261	143	7	47	\$23,101,818	87
Wisconsin	\$585,938,478	\$61,217,453	\$227,379,111	\$874,535,042	459	181	3	100	\$48,330,356	206
Sum	\$10,904,026,930	\$1,139,226,694	\$4,231,413,436	\$16,274,667,060	8,410	4,953	226	1,883	\$724,139,764	2,200
Average	\$908,668,911	\$94,935,558	\$352,617,786	\$1,356,222,255	701	413	19	157	\$60,344,980	183

B.1.3 2005 AUTM Survey by State

State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New US Patent Applications Filed	Start-up Companies Formed	US Patents Issued	License Income Received	Licenses and Options Executed
California	\$2,506,208,030	\$261,842,630	\$972,558,340	\$3,740,609,000	2,073	1,239	42	517	\$100,595,474	380
Florida	\$952,191,905	\$99,482,736	\$369,507,306	\$1,421,181,948	651	404	22	136	\$45,890,540	127
Georgia	\$779,090,495	\$81,397,514	\$302,333,625	\$1,162,821,635	566	423	15	83	\$591,317,040	161
Illinois	\$1,512,443,300	\$158,016,464	\$586,918,295	\$1,573,807,910	526	294	13	107	\$18,035,806	100
Massachusetts	\$1,783,139,605	\$186,298,168	\$691,964,623	\$2,661,402,396	966	601	34	230	\$87,844,762	249
Michigan	\$924,241,368	\$96,562,531	\$358,660,829	\$1,379,464,728	534	279	13	129	\$42,833,305	169
Minnesota	\$367,744,910	\$38,421,110	\$142,706,980	\$548,873,000	251	98	1	51	\$46,223,595	82
New York	\$1,455,695,037	\$152,087,541	\$564,896,582	\$2,172,679,160	833	600	21	149	\$3,155,150,784	248
North Carolina	\$847,741,333	\$88,569,990	\$328,974,248	\$1,265,285,571	557	178	14	125	\$58,831,604	162
Texas	\$1,258,033,362	\$131,436,321	\$488,192,051	\$1,877,661,734	666	329	18	120	\$34,337,917	213
Washington	\$1,023,588,487	\$106,942,081	\$397,213,443	\$1,527,744,011	622	198	7	76	\$62,012,100	168
Wisconsin	\$606,136,364	\$63,327,680	\$235,217,096	\$904,681,140	44	213	6	94	\$485,408	221
Sum	\$14,016,254,196	\$1,464,384,767	\$5,439,143,419	\$20,236,212,233	8,289	4,856	206	1,817	\$4,243,558,335	2,280
Avg	\$1,168,021,183	\$122,032,064	\$453,261,952	\$1,686,351,019	691	405	17	151	\$353,629,861	190

B.2 AUTM Survey of Universities by States

B.2.1 2003 AUTM Survey of Universities by States

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Name of Institution	State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New U.S Patent Applications Filed	Licenses and Options Executed	License Income Received	U.S Patents Issued	Start-up Companies Formed	
Univ. of California System	California	\$173,137,800	\$18,363,100	\$70,829,100	\$262,330,000	1,027	490	208	\$61,119,000	323	22	
Stanford Univ.	California	\$422,331,000	\$44,792,682	\$172,771,773	\$639,895,454	362	290	128	\$43,154,111	117	12	
Univ. of Southern California	California	\$273,306,000	\$28,987,000	\$111,807,000	\$414,100,000	131	94	77	\$2,943,324	34	6	
California Inst. of Technology	California	\$242,220,000	\$25,690,000	\$99,090,000	\$367,000,000	504	207	39	\$25,359,000	169	7	
TOTAL		\$1,110,994,800	\$117,832,782	\$454,497,873	\$1,683,325,454	2,024	1,081	452	\$132,575,435	643	47	
Univ. of Florida Univ. of South	Florida	\$271,901,860	\$28,838,076	\$111,232,579	\$411,972,515	264	192	55	\$35,248,485	50	10	
Florida	Florida	\$161,911,719	\$17,172,455	\$66,236,612	\$245,320,786	98	92	7	\$1,230,953	20	1	
Univ. of Miami	Florida	\$160,908,000	\$17,066,000	\$65,826,000	\$243,800,000	50	12	7	\$203,147	7	0	
Florida State Univ. Univ. of Central	Florida	\$116,284,211	\$12,333,174	\$47,570,814	\$176,188,199	28	14	12	\$24,023,189	18	2	
Florida	Florida	\$66,513,434	\$7,054,455	\$27,210,041	\$100,777,930	42	37	4	\$179,292	22	0	
Florida Atlantic Univ.	Florida	\$34,176,512	\$3,624,782	\$13,981,300	\$51,782,594	21	8	2	\$121,355	0	0	
Miami Univ.	Florida				N.A	4	1	N.A	\$452,316	N.A	N.A	
TOTAL		\$811,695,736	\$86,088,942	\$332,057,346	\$1,229,842,024	507	356	87	\$61,458,737	117	13	
Georgia Inst. of Technology	Georgia	\$255,010,503	\$27,046,569	\$104,322,479	\$386,379,550	226	54	30	\$2,316,516	41	12	
Univ. of Georgia	Georgia	\$197,833,680	\$20,982,360	\$80,931,960	\$299,748,000	86	64	96	\$3,864,801	36	2	
Emory Univ.	Georgia	\$197,560,226	\$20,953,357	\$80,820,092	\$299,333,675	93	71	16	\$22,737,389	32	0	
Medical College of Georgia Research	Georgia	\$46,860,000	\$4,970,000	\$19,170,000	\$71,000,000	21	21	6	\$388,984	7	0	
TOTAL		\$697,264,409	\$73,952,286	\$285,244,531	\$1,056,461,225	426	210	148	\$29,307,690	116	14	
Univ. of Illinois, Chicago, Urbana	Illinois	\$518,158,080	\$54,956,160	\$211,973,760	\$785,088,000	229	118	86	\$7,622,236	39	6	
Northwestern Univ.	Illinois	\$216,562,344	\$22,968,733	\$88,593,686	\$328,124,764	124	69	17	\$1,203,267	26	2	
Univ. of Chicago/UCTech	Illinois	\$194,106,000	\$20,587,000	\$79,407,000	\$294,100,000	99	67	21	\$4,333,474	67	0	

Southern Illinois Univ.	Illinois	\$20,706,563	\$2,196,151	\$8,470,867	\$31,373,580	17	6	6	\$157,726	5	1
TOTAL		\$949,532,987	\$100,708,044	\$388,445,313	\$1,438,686,344	469	260	130	\$13,316,703	137	9
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Massachusetts											
Inst. of Technology	Massachusetts	\$656,273,640	\$69,604,780	\$268,475,580	\$994,354,000	452	235	114	\$24,252,109	152	15
Harvard Univ.	Massachusetts	\$355,704,756	\$37,726,262	\$145,515,582	\$538,946,600	119	45	69	\$17,797,965	59	4
Boston Univ./Boston Medical Ctr.	Massachusetts	\$196,572,875	\$20,848,638	\$80,416,176	\$297,837,690	79	58	12	\$1,730,658	9	2
Univ. of Massachusetts	Massachusetts	\$190,852,860	\$20,241,970	\$78,076,170	\$289,171,000	196	92	40	\$19,786,300	18	1
Tufts Univ.	Massachusetts	\$77,133,358	\$8,180,811	\$31,554,555	\$116,868,724	38	22	20	\$738,331	13	0
Brandeis Univ.	Massachusetts	\$31,699,626	\$3,362,082	\$12,968,029	\$48,029,737	15	5	4	\$348,179	9	0
Northeastern Univ.	Massachusetts	\$29,977,974	\$3,179,482	\$12,963,716	\$45,421,172	26	23	5	\$1,288,268	4	1
Worcester											
Polytechnic Inst.	Massachusetts	\$7,260,000	\$770,000	\$2,970,000	\$11,000,000	14	6	3	\$55,000	3	0
TOTAL		\$1,545,475,089	\$163,914,025	\$632,239,809	\$2,341,628,923	939	486	267	\$65,996,810	267	23
Univ. of Michigan Michigan State	Michigan	\$494,567,368	\$52,454,115	\$202,323,014	\$749,344,497	257	97	76	\$7,423,419	64	9
Univ.	Michigan	\$212,130,600	\$22,498,700	\$86,780,700	\$321,410,000	75	64	28	\$24,462,676	39	1
Wayne State Univ.	Michigan	\$141,053,220	\$14,960,190	\$57,703,590	\$213,717,000	46	29	5	\$13,690,981	9	1
Michigan Technological Univ.	Michigan	\$19,974,240	\$2,118,480	\$8,171,280	\$30,264,000	26	8	9	\$368,430	2	0
TOTAL		\$867,725,428	\$92,031,485	\$354,978,584	\$1,314,735,497	404	198	118	\$45,945,506	114	11
Univ. of Minnesota	Minnesota	\$335,647,620	\$35,598,990	\$137,310,390	\$508,557,000	218	72	56	\$37,492,778	54	4
TOTAL		\$335,647,620	\$35,598,990	\$137,310,390	\$508,557,000	218	72	56	\$37,492,778	54	4
SUNY Research Fdn.	New York	\$415,312,850	\$44.048.333	\$169,900,711	\$629,261,894	235	122	34	\$13,726,454	51	4
Cornell Research			, , , , , , , , , , , , , , , , , , , ,				132				
Fdn., Inc.	New York	\$333,036,000	\$35,322,000	\$136,242,000	\$504,600,000	186	65	50	\$3,251,600	53	13
Univ. of Rochester	New York	\$182,992,920	\$19,408,340	\$74,860,740	\$277,262,000	118	73	12	\$26,741,537	22	2
New York Univ. Mount Sinai	New York	\$148,387,140	\$15,738,030	\$60,703,830	\$224,829,000	93	63	24	\$85,933,234	21	4
School of Medicine of NYU	New York	\$145,200,000	\$15,400,000	\$59,400,000	\$220,000,000	55	16	8	\$2,778,713	18	0

Rensselaer Polytechnic Inst.	New York	\$30,850,380	\$3,272,010	\$12,620,610	\$46,743,000	86	93	9	\$59,500	12	2
TOTAL		\$1,255,779,290	\$133,188,713	\$513,727,891	\$1,902,695,894	773	442	137	\$132,491,038	177	25
Duke Univ. Univ. of North	North Carolina	\$313,469,422	\$33,246,757	\$128,237,491	\$474,953,669	125	90	39	\$2,715,801	50	1
Carolina, Chapel Hill	North Carolina	\$199,925,693	\$21,204,240	\$81,787,784	\$302,917,717	86	67	54	\$3,808,043	34	2
North Carolina State Univ.	North Carolina	\$188,776,500	\$20,021,750	\$77,226,750	\$286,025,000	219	88	66	\$4,602,665	49	7
Wake Forest Univ.	North Carolina	\$82,434,000	\$8,743,000	\$33,723,000	\$124,900,000	38	7	12	\$19,300,000	9	1
Univ. of North Carolina at Greensboro	North Carolina	\$19,578,949	\$2,076,555	\$8,009,570	\$29,665,074	13	2	1	\$0	0	1
Univ. of North											
Carolina, Charlotte East Carolina Univ.	North Carolina North Carolina	\$11,601,321 \$8,263,200	\$1,230,443 \$876,400	\$4,745,995 \$3,380,400	\$17,577,759 \$12,520,000	69 7	42 11	2	\$11,500 \$252,175	3	<u>4</u> 0
North Carolina A&T State Univ.	North Carolina	ψ0,200,200	φοιο, ισο	φο,οσο, του	NA NA	13	1	1	N.A	N.A	N.A
TOTAL		\$824,049,085	\$87,399,145	\$337,110,989	\$1,248,559,219	570	308	183	\$30,690,184	152	16
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Texas A&M Univ. System	Texas	\$301,115,100	\$31,936,450	\$123,183,450	\$456,235,000	117	57	81	\$7,105,867	27	5
Univ. of Texas at Austin	Texas	\$226,944,300	\$24,069,850	\$92,840,850	\$343,855,000	68	18	20	\$3,919,605	28	6
Baylor College of Medicine	Texas	\$206,599,800	\$21,912,100	\$84,518,100	\$313,030,000	111	43	55	\$7,023,000	21	2
Univ. of Texas Southwestern Med.	Texas	\$183,451,297	\$19,456,956	\$75,048,258	\$277,956,511	103	31	33	\$10,630,537	19	1
Univ. of Texas Medical Branch	Texas	\$101,060,520	\$10,718,540	\$41,342,940	\$153,122,000	47	39	19	\$254,468	4	1
Univ. of Texas Health Science											
Ctr., Houston Univ. of Texas	Texas	\$98,735,423	\$10,471,939	\$40,391,764	\$149,599,125	67	6	29	\$1,160,825	12	11
Health Science Ctr., San Antonio	Texas	\$87,980,640	\$9,331,280	\$35,992,080	\$133,304,000	43	19	24	\$2,408,968	9	N.A
Texas Tech Univ.	Texas	\$54,638,100	\$5,794,950	\$22,351,950	\$82,785,000	36	13	5	\$70,242	4	1
Univ. of Houston	Texas	\$51,332,726	\$5,444,380	\$20,999,751	\$77,776,857	53	27	2	\$252,354	3	0
Rice Univ.	Texas	\$35,958,401	\$3,813,770	\$14,710,255	\$54,482,425	57	47	1	\$12,740	8	1
Univ. of Texas at Dallas	Texas	\$18,591,496	\$1,971,825	\$7,605,612	\$28,168,934	33	10	4	\$75,000	6	1
Univ. of North Texas Health Science	Texas	\$11,655,600	\$1,236,200	\$4,768,200	\$17,660,000	4	8	2	\$5,973	3	1
Univ. of Texas at San Antonio	Texas	\$9,601,503	\$1,018,341	\$3,927,888	\$14,547,732	3	5	0	N.A	0	N.A
Southern Methodist Univ.	Texas	\$6,756,500	\$716,598	\$2,764,023	\$10,237,121	2	5	0	\$1,732	0	0
TOTAL		\$1,394,421,405	\$147,893,179	\$570,445,120	\$2,112,759,705	744	328	275	\$32,921,311	144	20

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Univ. of Washington/Wash. Res. Fdn.	Washington	\$517,711,903	\$54,908,838	\$211,791,233	\$784,411,974	199	73	67	\$29,131,798	46	3
Washington State Univ. Research Fdn.	Washington	\$77,611,727	\$8,231,547	\$31,750,252	\$117,593,525	38	23	5	\$309,518	15	0
TOTAL		\$595,323,629	\$63,140,385	\$243,541,485	\$902,005,499	237	96	72	\$29,441,316	61	3
W.A.R.F./Univ. of Wisconsin Madison	Wisconsin	\$476,023,680	\$50,487,360	\$194,736,960	\$721,248,000	406	146	177	\$37,573,468	87	0
Medical College of Wisconsin Research Fndtn	Wisconsin	\$61,919,845	\$6,567,256	\$25,330,846	\$93,817,947	40	19	7	\$745,070	3	2
Marquette Univ.	Wisconsin				N.A	6	1	11	\$0	0	0
TOTAL		\$537,943,525	\$57,054,616	\$220,067,806	\$815,065,947	452	166	195	\$38,318,538	90	2

B.2.2 2004 AUTM Survey of Universities by States

Name of Institution	State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New U.S Patent Applications Filed	Licenses and Options Executed	License Income Received	U.S Patents Issued	Start-up Companies Formed
Univ. of California System	California	\$187,049,059	\$19,542,439	\$72,586,202	\$279,177,700	1,196	515	273	\$74,275,000	270	5
Stanford Univ.	California	\$464,665,050	\$48,547,095	\$180,317,781	\$693,529,925	350	428	89	\$47,272,397	87	9
Univ. of Southern California	California	\$282,111,540	\$29,474,340	\$109,476,120	\$421,062,000	127	88	61	\$3,213,486	29	7
California Inst. of Technology	California	\$260,560,990	\$27,222,790	\$101,113,220	\$388,897,000	549	416	45	\$9,886,087	142	14
TOTAL		\$1,194,386,639	\$124,786,664	\$463,493,323	\$1,782,666,625	2,222	1,447	468	134,646,970	528	35
Univ. of Florida	Florida	\$286,758,166	\$29,959,808	\$111,279,288	\$427,997,263	278	233	64	\$37,402,284	53	8
Univ. of South Florida	Florida	\$177,818,864	\$18,578,090	\$69,004,335	\$265,401,289	138	100	11	\$1,357,725	22	4
Univ. of Miami	Florida	\$176,277,000	\$18,417,000	\$68,406,000	\$263,100,000	32	22	4	\$170,899	9	0
Florida State Univ.	Florida	\$137,483,554	\$14,363,953	\$53,351,827	\$205,199,334	54	25	6	\$14,316,563	22	0
Univ. of Central Florida	Florida	\$88,991,209	\$9,297,589	\$34,533,902	\$132,822,700	49	33	6	\$337,201	39	1
Florida Atlantic Univ.	Florida	\$32,643,177	\$3,410,481	\$12,667,502	\$48,721,160	34	15	4	\$71,608	3	2
Miami Univ.	Florida	\$11,852,300	\$1,238,300	\$4,599,400	\$17,690,000	14	1	1	\$500,000	1	0

TOTAL		\$911,824,270	\$95,265,222	\$353,842,254	\$1,360,931,746	599	429	96	54,156,280	149	15
Georgia Inst. of Technology	Georgia	\$299,297,423	\$31,269,880	\$116,145,269	\$446,712,572	277	273	35	\$2,315,024	41	15
Emory Univ.	Georgia	\$218,289,860	\$22,806,403	\$84,709,498	\$325,805,761	93	54	27	\$22,517,830	22	2
Univ. of Georgia	Georgia	\$209,817,200	\$21,921,200	\$81,421,600	\$313,160,000	103	59	71	\$8,252,595	17	3
Medical College of Georgia Research	Georgia	\$51,590,000	\$5,390,000	\$20,020,000	\$77,000,000	26	35	4	\$63,088	1	0
TOTAL		\$778,994,483	\$81,387,483	\$302,296,367	\$1,162,678,333	499	421	137	33,148,537	81	20
Univ. of Illinois, Chicago, Urbana	Illinois	\$545,205,800	\$56,961,800	\$211,572,400	\$813,740,000	262	108	88	\$5,793,914	59	16
Northwestern Univ.	Illinois	\$238,148,408	\$24,881,177	\$92,415,800	\$355,445,385	137	139	21	\$1,522,500	18	1
Univ. of Chicago/UCTech	Illinois	\$218,103,090	\$22,786,890	\$84,637,020	\$325,527,000	116	35	26	\$8,814,356	23	0
Southern Illinois Univ.	Illinois	\$21,219,517	\$2,216,964	\$8,234,439	\$31,670,921	15	9	4	\$224,535	6	0
TOTAL	Timois	\$1,022,676,815	\$106,846,831	\$396,859,660	\$1,526,383,306	530	291	139	16,355,305	106	17
TOTAL		ψ1,022,070,013	ψ100,040,051	ψ290,029,000	ψ1,520,505,500	250	271	137	10,000,000	100	17
Massachusetts Inst. of											
Technology	Massachusetts	\$68,809,000	\$7,189,000	\$26,702,000	\$102,700,000	515	287	134	\$25,781,923	159	20
Harvard Univ.	Massachusetts	\$395,696,975	\$41,341,475	\$153,554,050	\$590,592,500	160	73	50	\$16,654,975	35	4
Univ. of Massachusetts	Massachusetts	\$231,535,250	\$24,190,250	\$89,849,500	\$345,575,000	141	108	36	\$26,258,577	16	2
Boston Univ./Boston											
Medical Ctr.	Massachusetts	\$217,975,490	\$22,773,559	\$84,587,504	\$325,336,552	93	51	17	\$1,453,389	21	4
Tufts Univ. Northeastern	Massachusetts	\$87,020,809	\$9,091,726	\$33,769,269	\$129,881,805	52	18	16	\$456,368	13	3
Univ.	Massachusetts	\$32,734,276	\$3,419,999	\$12,702,854	\$48,857,129	47	41	3	\$1,451,091	4	1
Brandeis Univ.	Massachusetts	\$22,301,851	\$2,330,044	\$8,654,450	\$33,286,345	6	2	4	\$432,056	7	1 25
TOTAL		\$1,056,073,652	\$110,336,053	\$409,819,626	\$1,576,229,331	1,014	580	260	72,488,379	255	35
Univ. of Michigan	Michigan	\$504,193,128	\$52,676,894	\$195,657,035	\$752,527,056	285	149	73	\$10,633,528	74	13
Michigan State Univ.	_	\$218,073,610					64	44	\$36,402,250		5
Wayne State Univ.	Michigan Michigan	\$218,073,610 \$151,068,250	\$22,783,810 \$15,783,250	\$84,625,580 \$58,623,500	\$325,483,000 \$225,475,000	152 42	12	13	\$36,402,250	45 12	3
Michigan											
Technological	Michigan	\$23,898,900	\$2,496,900	\$9,274,200	\$35,670,000	60	23	15	\$530,536	4	2

Univ.											
TOTAL		\$897,233,888	\$93,740,854	\$348,180,315	\$1,339,155,056	539	248	145	50,167,870	135	23
Univ. of											ļ
Minnesota	Minnesota	\$345,090,870	\$36,054,270	\$133,915,860	\$515,061,000	224	83	100	\$45,550,764	38	3
TOTAL		\$345,090,870	\$36,054,270	\$133,915,860	\$515,061,000	\$224	\$83	\$100	\$45,550,764	\$38	\$3
SUNY Research											
Fdn.	New York	\$475,817,369	\$49,712,262	\$184,645,546	\$710,175,177	257	124	50	\$13,363,714	43	7
Cornell Research Fdn. Inc.	New York	\$360,259,000	\$37,639,000	\$139,802,000	\$537,700,000	225	89	80	\$7,233,500	53	6
Univ. of Rochester Mount Sinai	New York	\$204,832,400	\$21,400,400	\$79,487,200	\$305,720,000	139	158	23	\$33,736,882	24	7
School of Medicine of NYU	New York	\$164,820,000	\$17,220,000	\$63,960,000	\$246,000,000	67	23	13	\$6,790,336	14	1
New York Univ.	New York	\$163,758,050	\$17,109,050	\$63,547,900	\$244,415,000	94	46	30	\$109,023,125	23	4
Rensselaer Polytechnic Inst.	New York	\$40,757,534	\$4,258,250	\$15,816,356	\$60,832,140	91	51	11	\$131,376	7	4
TOTAL	Tien Total	\$1,410,244,352	\$147,338,962	\$547,259,002	\$2,104,842,317	873	491	207	170,278,933	164	29
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Duke Univ.	North Carolina	\$329,667,246	\$34,442,847	\$127,930,573	\$492,040,666	127	38	51	\$3,794,523	32	10
Univ. of North Carolina, Chapel Hill	North Constitut	£210 504 081	#22 022 25 <i>6</i>	\$85,181,037	\$227.C10.274	120	59	38	\$3,818,314	30	3
North Carolina	North Carolina	\$219,504,981	\$22,933,356		\$327,619,374						
State Univ.	North Carolina	\$196,122,400	\$20,490,400	\$76,107,200	\$292,720,000	176	112	72	\$4,813,156	46	4
Wake Forest Univ. North Carolina	North Carolina	\$92,220,366	\$9,634,964	\$35,787,008	\$137,642,337	30	9	7	\$34,296,000	9	1
A&T State Univ. Univ. of North	North Carolina	\$23,115,000	\$2,415,000	\$8,970,000	\$34,500,000	13	2	1	\$0	0	0
Carolina, Charlotte	North Carolina	\$16,560,458	\$1,730,197	\$6,426,446	\$24,717,101	70	47	4	\$77,300	6	2
East Carolina Univ.	North Carolina	\$8,908,320	\$930,720	\$3,456,960	\$13,296,000	14	5	1	\$418,610	5	0
Univ. of North Carolina at											
Greensboro	North Carolina	Φ99.¢ 022. TT 2	фод 555 102	#242.870.225	NA	18	5	4	\$32,212	120	1
TOTAL		\$886,098,770	\$92,577,483	\$343,859,224	\$1,322,535,478	568	277	178	47,250,115	129	21
Baylor College of Medicine	Texas	\$267,499,510	\$27,947,710	\$103,805,780	\$399,253,000	138	32	54	\$6,758,000	18	2
Univ. of Texas at Austin	Texas	\$230,403,620	\$24,072,020	\$89,410,360	\$343,886,000	87	41	23	\$5,057,647	36	5

Univ. of Texas Southwestern Med.	Texas	\$210,650,029	\$22,008,212	\$81,744,787	\$314,403,028	88	27	34	\$11,541,081	35	0
Univ. of Texas Medical Branch	Texas	\$111,754,660	\$11,675,860	\$43,367,480	\$166,798,000	64	28	15	\$222,994	9	1
Univ. of Texas Health Science Ctr., Houston	Texas	\$99,344,477	\$10,379,274	\$38,551,588	\$148,275,339	44	33	25	\$1,998,947	12	1
Univ. of Texas Health Science Ctr., San Antonio	Texas	\$91,816,130	\$9,592,730	\$35,630,140	\$137,039,000	55	17	10	\$2,211,194	11	3
Univ. of Houston	Texas	\$47,428,122	\$4,955,177	\$18,404,943	\$70,788,242	34	42	4	\$534,053	6	0
Rice Univ.	Texas	\$47,377,411	\$4,949,879	\$18,385,264	\$70,712,553	55	125	4	\$122,000	18	3
Texas Tech Univ.	Texas	\$45,687,796	\$4,773,352	\$17,729,592	\$68,190,740	43	12	5	\$157,365	3	3
Univ. of North Texas Health Science	Texas	\$12,693,307	\$1,326,166	\$4,925,761	\$18,945,234	10	1	1	\$60,300	2	0
Southern Methodist Univ.	Texas	\$8,274,328	\$864,482	\$3,210,933	\$12,349,743	4	4	2	\$856	1	0
TOTAL		\$1,172,929,389	\$122,544,862	\$455,166,629	\$1,750,640,879	622	362	177	28,664,437	151	18
Univ. of Washington/Wash. Res. Fdn.	Washington	\$558,717,978	\$58,373,520	\$216,815,932	\$833,907,430	233	104	70	\$22,808,483	38	7
Washington State Univ. Research											
Fdn.	Washington	\$83,817,346	\$8,757,036	\$32,526,134	\$125,100,517	28	39	17	\$293,335	9	0
TOTAL		\$642,535,324	\$67,130,556	\$249,342,066	\$959,007,947	261	143	87	23,101,818	47	7
Univ. of Wisconsin at Madison	Wisconsin	\$511,796,250	\$53,471,250	\$198,607,500	\$763,875,000	405	163	203	\$47,689,165	93	2
Medical College of Wisconsin	W	¢74 142 229	Ф7 74C 202	¢20.771.611	6110 ((0.042	54	10	3	¢<41.101	7	
Research Fndtn	Wisconsin	\$74,142,228	\$7,746,203	\$28,771,611	\$110,660,042	54	18		\$641,191		1
TOTAL		\$585,938,478	\$61,217,453	\$227,379,111	\$874,535,042	459	181	206	48,330,356	100	3
W.A.R.F./Univ. of Wisconsin Madison	Wisconsin	\$476,023,680	\$50,487,360	\$194,736,960	\$721,248,000	406	146	177	\$37,573,468	87	0
Medical College of Wisconsin											
Research Fndtn	Wisconsin	\$61,919,845	\$6,567,256	\$25,330,846	\$93,817,947	40	19	7	\$745,070	3	2
Marquette Univ.	Wisconsin	¢527 042 525	\$57.054.616	\$220.067.907	N.A	6	166	11	\$0	0	0
TOTAL		\$537,943,525	\$57,054,616	\$220,067,806	\$815,065,947	452	166	195	\$38,318,538	90	2

B.2.3 2005 AUTM Survey of Universities by States

	B.2.3 2003 ACTIVISHIVEY OF CHIVETSHIES BY STATES											
Name of Institution	State	Federal Sponsored	Industry Sponsored	Other	Total Sponsored Research Expenditure	Invention Disclosures Received	New U.S Patent Applications Filed	Licenses and Options Executed	License Income Received	U.S Patents Issued	Start-up Companies Formed	
Univ. of Southern California	California	\$289,306,000	\$30,226,000	\$112,268,000	\$431,800,000	120	76	65	\$2,875,820.00	35	7	
California Inst. of Technology	California	\$262,824,250	\$27,459,250	\$101,991,500	\$392,275,000	649	562	50	\$10,220,654.00	172	16	
Univ. of California System	California	\$1,954,077,780	\$204,157,380	\$758,298,840	\$2,916,534,000	1304	601	265	\$87,499,000.00	310	19	
TOTAL		\$2,506,208,030	\$261,842,630	\$972,558,340	\$3,740,609,000	2073	1239	380	\$100,595,474.00	517	42	
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Univ. of Florida Univ. of Central	Florida	\$320,260,000	\$33,460,000	\$124,280,000	\$478,000,000	273	187	66	\$40,269,596.00	54	13	
Florida	Florida	\$81,538,330	\$8,518,930	\$31,641,740	\$121,699,000	132 44	30	6 17	\$163,955.00	29 4	0	
Univ. of Miami Univ. of South Florida	Florida Florida	\$192,281,960 \$181,449,880	\$20,089,160 \$18,957,450	\$74,616,880 \$70,413,386	\$286,988,000 \$270,820,717	120	76	20	\$635,132.00 \$1,547,306.00	23	6	
Florida Atlantic Univ.	Florida	\$33,635,474	\$3,514,154	\$13,052,572	\$50,202,200	21	9	1	\$94,611.00	6	0	
Florida State Univ.	Florida	\$128,263,494	\$13,400,664	\$49,773,893	\$191,438,051	49	19	11	\$2,546,440.00	19	1	
Miami Univ.	Florida	\$14,762,767	\$1,542,379	\$5,728,835	\$22,033,980	12	3	6	\$633,500.00	1	0	
TOTAL		\$952,191,905	\$99,482,736	\$369,507,306	\$1,421,181,948	651	404	127	\$45,890,540.00	136	22	
											_	
Univ. of Georgia Emory Univ.	Georgia Georgia	\$212,260,020 \$231,617,972	\$22,176,420 \$24,198,893	\$82,369,560 \$89,881,601	\$316,806,000 \$345,698,465	96 114	54	30	\$10,534,004.00 \$576,224,885.00	20 17	2	
Georgia Inst. of Technology	Georgia	\$231,617,572	\$29,422,202	\$109,282,464	\$420,317,170	324	282	37	\$4,478,516.00	43	9	
Medical College of Georgia	Georgia	\$281,012,304	\$27,422,202	\$107,282,404	φ420,317,170	324	202	31	φ4,476,510.00	43	,	
Research Inst.	Georgia	\$53,600,000	\$5,600,000	\$20,800,000	\$80,000,000	32	23	10	\$79,635.00	3	0	
TOTAL		\$779,090,495	\$81,397,514	\$302,333,625	\$1,162,821,635	566	423	161	\$591,317,040.00	83	15	
Univ. of Illinois, Chicago, Urbana	Illinois	\$548,053,300	\$57,259,300	\$212,677,400	\$817,990,000	312	134	63	\$7,115,689.00	65	7	
Univ. of Chicago/UCTech	Illinois	\$251,250,000	\$26,250,000	\$97,500,000	\$375,000,000	98	43	16	\$6,900,918.00	21	0	
Northwestern Univ.	Illinois	\$713,140,000	\$74,507,164	\$276,740,895	\$380,817,910	116	117	21	\$4,019,199.00	21	6	
TOTAL		\$1,512,443,300	\$158,016,464	\$586,918,295	\$1,573,807,910	526	294	100	\$18,035,806.00	107	13	

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Massachusetts Inst. of Technology (MIT)	Massachusetts	\$759,110,000	\$79,310,000	\$294,580,000	\$1,133,000,000	512	290	93	\$35,060,162.00	133	20
Boston Univ./Boston Medical Ctr.	Massachusetts	\$225,734,560	\$23,584,208	\$87,598,486	\$336,917,253	106	73	14	\$2,507,924.00	11	3
Harvard Univ.	Massachusetts	\$417,637,465	\$43,633,765	\$162,068,270	\$623,339,500	125	80	58	\$19,850,474.00	44	7
Tufts Univ.	Massachusetts	\$92,572,253	\$9,671,728	\$35,923,561	\$138,167,542	45	23	18	\$577,561.00	14	1
Univ. of											•
Massachusetts	Massachusetts	\$252,417,140	\$26,371,940	\$97,952,920	\$376,742,000	121	88	50	\$28,155,807.00	15	1
Brandeis Univ. Northeastern	Massachusetts					14	6	10	\$631,100.00	2	1
Univ. TOTAL	Massachusetts	\$35,668,188	\$3,726,527	\$13,841,386	\$53,236,101	43 966	41 601	6 249	\$1,061,734.00	11	34
TOTAL		\$1,783,139,605	\$186,298,168	\$691,964,623	\$2,661,402,396	900	601	249	\$87,844,762.00	230	34
Univ. of Michigan	Michigan	\$521,301,358	\$54,464,321	\$202,296,049	\$778,061,728	287	133	86	\$15,556,319.00	80	7
Michigan Technological Univ.	Michigan	\$27,695,790	\$2,893,590	\$10,747,620	\$41,337,000	51	0	7	\$402,354.00	9	1
Wayne State Univ.	Michigan	\$151,641,770	\$15,843,170	\$58,846,060	\$226,331,000	57	25	15	\$3,339,709.00	11	1
Michigan State Univ.	Michigan	\$223,602,450	\$23,361,450	\$86,771,100	\$333,735,000	139	121	61	\$23,534,923.00	29	4
TOTAL	Miningan	\$924,241,368	\$96,562,531	\$358,660,829	\$1,379,464,728	534	279	169	\$42,833,305.00	129	13
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Univ. of Minnesota	Minnesota	\$367,744,910	\$38,421,110	\$142,706,980	\$548,873,000	251	98	82	\$46,223,595.00	51	1
TOTAL		\$367,744,910	\$38,421,110	\$142,706,980	\$548,873,000	251	98	82	\$46,223,595.00	51	1
Research Foundation of SUNY	New York	492980724.4	51505448.82	191305952.8	735792126	252	128	84	\$13,511,991.00	35	6
Cornell Research Fdn., Inc.	New York	376084400	39292400	145943200	561320000	201	108	79	\$3,812,500.00	51	5
Univ. of Rochester	New York	\$228,519,092	\$23,875,129	\$88,679,050	\$341,073,271	136	225	25	\$30,470,068.00	12	5
New York Univ.	New York	\$162,698,110	\$16,998,310	\$63,136,580	\$242,833,000	102	48	34	\$3,091,026,759.00	21	3
Mount Sinai School of											
Medicine of NYU Rensselaer	New York	\$153,765,000	\$16,065,000	\$59,670,000	\$229,500,000	60	18	12	\$16,137,711.00	9	0
Polytechnic Inst.	New York	\$41,647,711	\$4,351,253	\$16,161,798	\$62,160,763	82	73	14	\$191,755.00	21	2
TOTAL		\$1,455,695,037	\$152,087,541	\$564,896,582	\$2,172,679,160	833	600	248	\$3,155,150,784.00	149	21

North Carolina											
State Univ.	North Carolina	\$126,688,442	\$13,236,106	\$49,162,679	\$189,087,227	178		69	\$2,954,674.00	49	4
Wake Forest Univ. Univ. of North	North Carolina	\$102,853,938	\$10,745,934	\$39,913,469	\$153,513,341	40	0	10	\$49,945,169.00	8	1
Carolina, Chapel Hill	North Carolina	\$230,570,995	\$24,089,507	\$89,475,311	\$344,135,813	113	58	47	\$1,963,308.00	26	2
Duke Univ.	North Carolina	\$341,949,240	\$35,726,040	\$132,696,720	\$510,372,000	128	55	29	\$3,607,749.00	25	3
Univ. of North Carolina,											
Charlotte East Carolina	North Carolina	\$16,825,482	\$1,757,886	\$6,529,291	\$25,112,659	70	56	3	\$11,539.00	12	3
Univ.	North Carolina	\$9,540,800	\$996,800	\$3,702,400	\$14,240,000	10	5	2	\$328,579.00	4	0
Univ. of North Carolina at Greensboro	North Carolina	\$19,312,436	\$2,017,717	\$7,494,378	\$28,824,531	18	4	2	\$20,586.00	1	1
TOTAL		\$847,741,333	\$88,569,990	\$328,974,248	\$1,265,285,571	557	178	162	\$58,831,604.00	125	14
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Baylor College of Medicine	Texas	\$257,044,160	\$26,855,360	\$99,748,480	\$383,648,000	103	47	45	\$7,019,000.00	14	2
Univ. of Texas Health Science											
Ctr., Houston Univ. of Texas	Texas	\$103,373,627	\$10,800,230	\$40,115,139	\$154,288,996	46	13	30	\$2,937,428.00	8	1
Medical Branch	Texas	\$116,750,180	\$12,197,780	\$45,306,040	\$174,254,000	62	27	20	\$1,962,126.00	11	0
Univ. of Texas Southwestern Med. Ctr.	Texas	\$214,937,262	\$22,456,132	\$83,408,490	\$320,801,884	109	16	39	\$12,452,888.00	18	2
Univ. of Texas Health Science											
,Ctr., San Antonio	Texas	\$95,391,250	\$9,966,250	\$37,017,500	\$142,375,000	48	15	17	\$1,651,230.00	4	1
Univ. of Texas at Austin	Texas	\$275,357,270	\$28,768,670	\$106,855,060	\$410,981,000	127	104	25	\$6,768,549.00	32	4
Univ. of Houston	Texas	\$48,483,880	\$5,065,480	\$18,814,640	\$72,364,000	48	39	14	\$543,664.00	6	2
Texas Tech Univ.	Texas	\$50,280,553	\$5,253,192	\$19,511,857	\$75,045,602	47	16	7	\$106,795.00	6	1
Southern Methodist Univ.	Texas	\$9,687,187	\$1,012,094	\$3,759,207	\$14,458,488			0	\$2,788.00		
Rice Univ.	Texas	\$49,105,863	\$5,130,463	\$19,056,007	\$73,292,333	62	35	11	\$692,369.00	19	2
Univ. of North Texas Health											
Science Ctr.	Texas	\$14,958,066	\$1,562,783	\$5,804,622	\$22,325,471	14	5	2	\$201,080.00	0	0
Univ. of Texas, Arlington	Texas	\$22,664,063	\$2,367,887	\$8,795,010	\$33,826,960		12	3		2	3
TOTAL		\$1,258,033,362	\$131,436,321	\$488,192,051	\$1,877,661,734	666	329	213	\$34,337,917.00	120	18
Washington State Univ. Research Fdn.	Washington	\$86,121,760	\$8,997,796	\$33,420,384	\$128,539,940	37	17	9	\$1,550,011.00	16	
Univ. of Washington/Wash. Res. Fdn.	Washington	\$599,883,878	\$62,674,435	\$232,790,758	\$895,349,071	268	84	109	\$26,722,169.00	40	4

Washington Univ. St. Louis	Washington	\$337,582,850	\$35,269,850	\$131,002,300	\$503,855,000	317	97	50	\$33,739,920.00	20	3
TOTAL		\$1,023,588,487	\$106,942,081	\$397,213,443	\$1,527,744,011	622	198	168	\$62,012,100.00	76	7
Univ. of Wisconsin at Madison	Wisconsin	\$534,726,330	\$55,866,930	\$207,505,740	\$798,099,000		203	216		89	4
Medical College of Wisconsin Research Fndtn	Wisconsin	\$71,410,034	\$7,460,750	\$27,711,356	\$106,582,140	44	10	5	\$485,408.00	5	2
TOTAL		\$606,136,364	\$63,327,680	\$235,217,096	\$904,681,140	44	213	221	\$485,408.00	94	6

Appendix C—Detailed State IP Policies

C.1 Alabama

C.1.1 University IP Policies

The University of Alabama System ("UA") includes three doctoral universities, the University of Alabama, located in Tuscaloosa, the University of Alabama at Birmingham, and the University of Alabama in Huntsville. The UA has developed policies to comply with federal funding requirements, and outline the responsibilities and rights of researchers. Auburn University, a private research institution, and home to the Alabama Technology Transfer Center, has its own policies regarding research, similar but somewhat more comprehensive than the UA.²

The UA has a policy governing data ownership and retention resulting from sponsored research, in compliance with federal regulations.³ Under this policy, the University assumes ownership and stewardship for sponsored research generated by the University, with specific responsibilities including:

- 1. complying with the terms of research or sponsored project agreements;
- 2. ensuring the appropriate use of animals, human subjects, recombinant DNA, etiological agents, radioactive materials, and the like;
- 3. protecting the rights of students, postdoctoral scholars, and staff, including, but not limited to, their rights to have access to data results from research or sponsored projects in which they participated;
- 4. securing intellectual property rights; and,
- 5. facilitating the investigation of charges, such as scientific misconduct or conflict of interest.⁴

¹ The University of Alabama System, http://www.uasystem.ua.edu/.

² Alabama Technology Transfer Center, http://www.alabamat2.org/.

³ The University Of Alabama Policy And Procedures For Research And Other Sponsored Project Data Ownership And Retention, University of Alabama, http://osp.ua.edu/UA%20Data%20Retention%20Policy(final).pdf.

⁴ *Id*.

UA retains rights to all sponsored research discoveries and data, but does allow for the Principal Investigator ("PI") to retain copies of the research records and materials he or she creates in support of academic freedom.⁵ In regard to government sponsored research, UA requires that data be kept for a minimum of three years after the close-out documents have been delivered to the government.⁶ As a consideration for the assignment of rights to UA, inventors are entitled to receive 50% of the royalties, fees, and other financial return from the invention, less 15% for overhead costs, and a deduction for the costs of obtaining and maintaining patent protection.⁷

Auburn University differentiates in the handling of federal and state sponsored research. Federally sponsored research is subject to federal regulations and individual contractual terms in regard to ownership of the resulting intellectual property, while state sponsored research is treated identically to internally funded research. Unless otherwise agreed, inventors (including faculty, staff, and students) may receive proceeds from state sponsored research inventions on the following scale:

30% of Net Proceeds with Net Proceeds being Up to $\$100,\!000$

25% of Net Proceeds with Net Proceeds being the Next \$100,000

20% of Net Proceeds with Net Proceeds being the Next \$100,000

15% of Net Proceeds with Net Proceeds being everything over \$300,000¹⁰

Net proceeds refers to the proceeds of the invention minus the costs of patent protection and marketing, and are distributed annually.¹¹

C.1.2 Specialized Funding Agency IP Policies

⁵ *Id*.

⁶ *Id*.

⁷ *University of Alabama Patent Policy*, University of Alabama, http://facultysenate.ua.edu/handbook/append-g.html.

⁸ Auburn University Patent Policy, Auburn University, http://ott.auburn.edu/forms/ppolicy.htm

⁹ *Id*.

¹⁰ *Id*.

¹¹ Id.

The Alabama Technology Network ("ATN"), a division of the Auburn Technical Assistance Center, is an organization that links two-year colleges, the University of Alabama System, Auburn University, and the Economic Development Partnership of Alabama to increase the competitiveness of private industry within the state. ¹² The ATN has four primary objectives:

- 1. Business and Technical Assistance to enhance profitability through improving efficiency and cost-effective hands-on problem solving.
- 2. Workforce Development to upgrade the skills of the present and future workforce to use new technologies.
- 3. Technology Identification and Development to conduct applied research to solve manufacturing problems and create improved products.
- 4. Technology Transfer to deliver new and developing technologies from public and private sources to manufacturers. ¹³

The ATN is Alabama's affiliate of the National Institute of Standards and Technology's Manufacturing Extension Partnership. ¹⁴ It provides services such as on-site technical consultations, conducting detailed needs assessments, outlining potential solutions, providing technical assistance to solve problems, identifying external service providers as needed, and providing worker training to improve skills and productivity. ¹⁵

C.2 Alaska

C.2.1 University IP Policies

On July 22, 2004, Alaska Statute Section 1. AS 14.40.210 (a) was amended to include a clause allowing the president of the University of Alaska to authorize the creation of jointly owned businesses:

Powers of president of the university; research and development.

(a) The president of the University of Alaska may:

¹² *Alabama Technology Network*, http://www.atn.auburn.edu/atn_index.html.

¹³ *Id*.

¹⁴ *Id*.

¹⁵ *Id*.

4. approve a contract between the University of Alaska and an employee that authorizes the employee to conduct research or other development of intellectual property and to develop, operate, or own a business related to or resulting from the research conducted during the employment; a business described under this paragraph may be jointly owned by the employee and the University of Alaska.

In May 2002, Alaska State Senate Joint Resolution No. 44 (SJR044) requested that representative state and federal organizations jointly develop a Research and Development (R&D) plan to help expand and diversify Alaska's economy, protect the health of Alaskans and the environment of Alaska, and strengthen and maintain the health of state research institutions. A working group comprised of representatives from University of Alaska (UA), the Alaska Science and Technology Foundation (ASTF), the North Pacific Research Board (NPRB), and the US Arctic Research Commission (ARC) developed a comprehensive report on research and development in Alaska.

The report found that while "Nationally 74% of R&D is done by industry; in Alaska it's only 7%. University research is 57% of research in Alaska but is only 14% nationally. In addition, one-third of research in Alaska is funded by federal agencies compared to 8% nationally. Research in Alaska is heavily slanted toward basic research, and the size and concentration of research in Alaska is low. In 1999, Alaska ranked 49th of the 50 states, with only \$152 million in federal R&D expenditures; Alaska also has just \$245 in R&D spending per capita compared to the national average of \$850 per capita." ¹⁸

Citing the economic growth resulting from companies spun off from university research in areas such as Boston's Route 128, California's Silicon Valley, and North Carolina's Research Triangle Park, the report recommended that Alaska forge greater ties between industry and university research through the promotion of spin-off companies. ¹⁹ As university researcher participation in such spin-offs is prohibited under the Alaska Executive Branch Ethics Act (AS

¹⁶ Alaska Research: State Research & Development Plan, http://www.alaska.edu/AlaskaResearch/introSJR44.xml.

¹⁷ *Alaska Research and Development Report*, http://www.alaska.edu/AlaskaResearch/workGroups/finaldocs/AK_RD_Full_Report.doc.

¹⁸ *Id*.

¹⁹ *Id*.

39.52), the report asked that AS 14.40 be amended to allow for joint ownership of university research, enabling spin-offs.²⁰ The measure was passed in 2004.

The University of Alaska System includes three accredited universities in Anchorage, Fairbanks, and Juneau, as well as a dozen community campuses throughout the state. ²¹ Ownership and commercialization of research is governed by the University of Alaska's Regents' Policy. ²² Unless the product of permissible activities outside the university, or in circumstances where the mission of the university is better served by alternative action, inventions are assigned to the University of Alaska. ²³ Royalties, minus the costs of procuring and maintaining patent protection, are distributed on an annual basis as follows:

Total Net Royalty Per	Inventor's	University
Invention	Share	Share
(\$)	(%)	(%)
First \$10,000	100%	0%
> \$10,000	50%	50%

24

The president of the university is granted significant latitude as to the commercialization of research, including how the resulting revenue is to be used and how invention rights are assigned.²⁵

As to copyrightable materials, the university will assert ownership of work related materials except, those produced by faculty members as a part of their normal teaching and scholarly activities at the university, and which do not result from a project specifically funded in whole or in part by the university or by a sponsor of the university, or materials developed

²⁰ *Id*.

²¹ About UA, University of Alaska, http://www.alaska.edu/active/level2/locations.xml.

²² University of Alaska Regent's Policy, Part X – Academic Policy, Chapter VII – Research, Scholarship and Creative Activity, University of Alaska, http://www.alaska.edu/bor/regulation/10r/r10-07.doc.

²³ *Id*.

²⁴ *Id*.

²⁵ *Id*.

subject to other agreements.²⁶ Revenue from copyright licensing is divided equally between the university and the author.²⁷

C.2.2 Specialized Funding Agency IP Policies

No information found.

C.3 Arizona

C.3.1 University IP Policies

In 1986, in order to encourage industry-sponsored research, the Arizona legislature enacted A.R.S. § 15-1635.01 which allows the giving of title or the granting of licenses to the sponsor of the research.²⁸ The statute also allows an officer or employee of a state institution to establish and maintain a substantial interest in a private entity which supplies equipment, material, supplies or services to the institution in order to facilitate the transfer of technology developed by the officer or employee of an institution, subject to approval by the board of regents.²⁹

Arizona has three public universities, Arizona State University (ASU), Northern Arizona University, and the University of Arizona.³⁰ The Arizona Board of Regents ("ABOR") has an overall intellectual property policy governing the state universities.³¹ In addition, each of the universities has an individual intellectual property policy.

The ABOR Intellectual Property Policy is comprehensive, with detailed guidelines as to the assignment of title or licenses to sponsored research.³² Under the policy, a state university may agree to give the research sponsor an exclusive option for a limited period of time for the

²⁶ *Id*.

²⁷ *Id*.

²⁸ A.R.S. § 15-1635.01. Transfer of technology developed by universities; patent policies; officer or employee interest in private entity.

²⁹ *Id*.

³⁰ *The Universities*, Arizona Board of Regents, http://www.abor.asu.edu/2_the_universities/universities_section.html.

³¹ The University of Arizona Office of Technology Transfer, University of Arizona, http://ott.arizona.edu/about Policies.php.

³² ABOR Policy Manual Policy Number 6-908: Intellectual Property Policy, Arizona Board of Regents, http://www.abor.asu.edu/1_the_regents/policymanual/chap6/chap6_part2.htm#6-908.

right of first negotiation for a license to intellectual property owned by the university arising from a sponsored project. The option period runs for one year from formal disclosure to the sponsor of the research, or six months from the date of expiration of the sponsored project, whichever is earlier in time. A state university may also agree to assign title to the sponsor. A copy of the agreement to license or assign title must be supplied to the inventor(s) and principal investigator(s) of the research, who have a right to appeal prior to the execution of the agreement.³³

In cases of assignment of title, a provision for monetary support is required, which must take the form of one of three options:

- (a) The sponsor pays an assignment fee of at least fifty percent of the university's total cost of research and development, including all contract modifications or extensions.
- (b) The sponsor pays all costs of research, including salaries, materials, other direct costs, and the university's fully-burdened overhead.
- (c) If the sponsor is an Arizona State agency, the sponsor will pay all direct costs of research, including salaries and materials, and indirect costs or overhead to the extent permitted by agency rules. In exchange for this reduced overhead reimbursement, the university must (i) receive from the sponsor a significant percentage of any income received by the sponsor from the sale, transfer or licensing of the intellectual property, and (ii) address with the sponsor during negotiations the opportunity for the university to participate in the management of the intellectual property.³⁴

In addition, due-diligence milestones are to be negotiated on a case-by-base basis to include a reassignment right exercisable by the university if the sponsor has not made a good-faith attempt to meet the negotiated due-diligence milestones. The reassignment right allows for the university to license the technology to other parties, either exclusively or non-exclusively, or to collect a maintenance fee from the sponsor until the sponsor determines that it will not commercialize the intellectual property and grants the rights back to the university. Also

³³ *Id*.

³⁴ *Id*.

³⁵ *Id*.

included is windfall provision, in which an appropriate payment or payment schedule is specified based on some mutually agreed upon threshold or event.³⁶

In cases of licensing, due diligence and march-in-rights are also maintained as in cases of assignment of title. In addition, a provision for reasonable and customary royalties is to be included.

In cases of either licensing or assignment of title, the university retains the right to use the intellectual property for academic purposes. This includes the right to a royalty-free license for its own internal use of the intellectual property for research and educational purposes, and a provision that the university has the right to use the intellectual property in any and all subsequent sponsored research at the university. This also includes the right of the university to make public through publication or presentation any intellectual property developed under the agreement, following review by the sponsor for proprietary or trade secret information.

The sponsor is also responsible for all patent costs resulting from sponsored research, within predetermined limits.³⁷

In regard to revenue sharing, the university will pay the creator a minimum of fifty percent (50%) of the first net ten thousand dollars (\$10,000) received by the university and a minimum of twenty-five (25%) of the net amount received by the university in excess of the first net ten thousand dollars (\$10,000). This is based on the net income, less a university administrative fee not to exceed fifteen percent (15%), and the costs of securing and maintaining intellectual property protections.

In addition to technology transfers through sponsored research, a university may also enter into technology transfer agreements if either 1) an employee will be an officer, director, stockholder or maintain a material interest in the entity or 2) the technology transfer agreement is negotiated by a technology transfer or patent management firm in the performance of an agreement.³⁸

³⁶ *Id*.

³⁷ *Id*.

³⁸ *Id*.

The University of Arizona has its own intellectual property policy, in compliance with the ABOR Intellectual Property Policy. The policy further details revenue sharing arrangements, as follows:

Step	Income \$	Distributed to	Percent
1	First 10,000	Creator	100
2	Next 40,000	Creator	50
	Total 50,000	Investigator Discretionary Account	30
		Fund for Promotion of Research	20
3	Next 450,000	Creator	40
	Total 500,000	Investigator Discretionary Account	25
		Fund for Promotion of Research	25
		Department Account	5
		Dean's Account	5
4	Next 500,000	Creator	35
	Total	Investigator Discretionary Account	20
	1,000,000		
		Fund for Promotion of Research	30
		Department Account	10
		Dean's Account	5
5	1,000,000	Creator	25
	and Beyond	Investigator Discretionary Account	20
		Fund for Promotion of Research	40
		Department Account	10
		Dean's Account	5 ³⁹

In addition, the University of Arizona Intellectual Property Policy includes provisions to address the increasing use of computer technology in teaching and research, outlining the rights of the university and authors of software and electronic/digital works. The policy allows for the author to use any software or digital works at the university, outside the university for academic

 $^{^{39}\} University\ of\ Arizona.\ Intellectual\ Property\ Policy,\ University\ of\ Arizona,\ \ http://ott.arizona.edu/IP_policy.pdf.$

or non-profit purposes, as well as academic and non-commercial use after departing the university. Commercial use of such software is at the discretion of the university.⁴⁰

Arizona State University maintains an Office for Research and Sponsored Projects Administration, which also has a set of high-level guidelines based on the ABOR Intellectual Property Policy. The ASU intellectual property policy revenue sharing is in compliance with the ABOR intellectual property policy, and grants to the inventor(s) 50% of the first \$10,000 in net income received by the university and 33 1/3% of the net income received by the university in excess of the first net \$10,000. In addition, the Arizona State University Foundation has created Arizona Technology Enterprises, a non-profit organization which works with university inventors and industry to transform scientific progress into products and services.

Arizona Northern University refers to the ABOR Intellectual Property Policy directly. 44

C.3.2 Specialized Funding Agency IP Policies

No information found.

C.4 Arkansas

C.4.1 University IP Policies

The Arkansas Science & Technology Authority ("ASTA") was created by statute in 1983 with the mission to bring the benefits of science and advanced technology to the people and state of Arkansas. Under the statute, ASTA was given the authority to establish centers for applied technology, which are university units that conduct continuing programs of basic and applied research, development, and technology transfer in one or more technological areas in

⁴⁰ *Id*.

⁴¹ What should Industry know when contracting with ASU?, Arizona State University, http://researchadmin.asu.edu/contracting/handbook.cfm.

⁴² RSP 604: Intellectual Property Management Implementation Policy, Arizona State University, http://www.asu.edu/aad/manuals/rsp/rsp604.html

⁴³ About AZTE, Arizona Technology Enterprises, http://www.azte.com/about_mission.html

⁴⁴ *Technology Transfer & Intellectual Property*, Northern Arizona University, http://www.research.nau.edu/ovp/techtransfer.html.

⁴⁵ *About the Authority*, The Arkansas Science & Technology Authority, http://www.accessarkansasscience.org/about.html.

collaboration with and through the support of private enterprises.⁴⁶ In order to encourage investment in the centers, the state provides tax credit equal to 33% of qualified research expenditures made by industry.⁴⁷

In 2005, Arkansas Public Finance Law was amended to specifically allow for state agencies to contract with business organizations where services are to be provided by persons both associated with the business organization and with a university which will retain proprietary interests in the intellectual property generated.⁴⁸ The same statutory section allows for employees of a university to take a financial interest in companies which sponsor or commercialize university research, subject to university approval.⁴⁹

The University of Arkansas has one overarching policy addressing intellectual property, under Board Policy 210.1.⁵⁰ Under the policy, rights in sponsored research are determined by contract between the university and the sponsor. Inventors retain the right to publish and disseminate the knowledge gained, subject to the sponsor's limited review of the materials for proprietary information.⁵¹

Revenues generated by an inventor are shared in the following manner, minus the costs of administration and intellectual property protection:

First \$200,000	Inventor	50%
	Campus CEO	45%
	Patent Fund	5%
Above \$200,000	Inventor	35%
	Campus CEO	60%
	Patent Fund	5%

⁴⁶ A.C.A. § 15-3-130. Centers for applied technology; establishment.

⁴⁷ Centers for Applied Technology Program, The Arkansas Science & Technology Authority, http://www.asta.arkansas.gov/Centersforappliedtech.html.

⁴⁸ A.C.A. § 19-11-717. Institutions of higher education.

⁴⁹ *Id*.

⁵⁰ Office of Technology Licensing Inventor's Handbook, University of Arkansas, http://www.uark.edu/ua/techip/inventors/appendixa.html.

⁵¹ *Id*.

Net revenues are distributed on an annual basis.⁵²

Under the policy, the university may receive equity in compensation for the conveyance of rights to business entities, including stock, securities, stock options, warrants, buildings, real or personal property, or other non-cash consideration. Similarly, an inventor or author may serve as a member of the board of directors or other governing board or as an officer or an employee (other than as a consultant) of a business entity that has an agreement with the University relating to the commercialization of inventions or works and in which the University has equity subject to prior review and approval by the Chancellor or the chief executive officer of the unit of the University. The university's policy also addresses software created by employees to assist in education, identified as Technology Enhanced Course Materials ("TECM"). Copyright ownership of such materials is determined by the level of university resources used to create it, ranging from retention of all rights by the author, to joint ownership with the university, or university ownership in works made for hire. The conversity of the conversity of the conversity of the conversity ownership in works made for hire.

C.4.2 Specialized Funding Agency IP Policies

No information found.

C.5 California

C.5.1 University IP Policies

In 2004, the California Legislature passed ACR 252, requesting that the California Council on Science and Technology "...create a special study group to develop recommendations to the Governor and the Legislature on how the state should treat intellectual property created under state contracts, grants, and agreements..." In January 2006, a report containing a series of recommendations for a statewide intellectual property policy was delivered

⁵² *Id*.

⁵³ *Id*.

⁵⁴ *Id*.

⁵⁵ Appendix B: Board Policy 210.2: Copyright and Distance Learning, University of Arkansas, http://www.uark.edu/ua/techip/inventors/appendixb.html.

⁵⁶ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p.16.

to the California Legislature. While there have been several bills introduced to create a state intellectual property policy, none have passed into law.⁵⁷

The University of California has separate patent and copyright policies, under the auspices of the Office of the President, applicable to all UC institutions.⁵⁸ Under the patent policy, the university retains the right to all patents; however, the university may release the rights to inventions if either the university elects not to file a patent application, or the equity of the situation clearly indicates such release should be given, provided in either case that no further research or development to develop that invention will be conducted involving University support or facilities, and provided further that a shop right is granted to the University.⁵⁹ Revenue from intellectual property is shared with the inventor in the amount of 35% of the net revenue, which deducts the costs of administration and intellectual property protection.⁶⁰ An additional 15% of the net revenue is allocated for research purposed to the inventor's campus or laboratory.⁶¹ The university may receive equity from commercial partners, and the disposition of any net income from patents is to be prioritized against further research.⁶²

Research funding agreements may provide the sponsor a time-limited first right to negotiate a license to patentable inventions (other than plant patents) conceived and reduced to practice in the course of the sponsored research. Such licenses must be royalty-bearing, provide for diligent development, commercial marketing, or use as one condition for retention of the license; and (normally) require reimbursement of patent prosecution and maintenance costs, a license issue fee, and appropriate minimum annual royalties.⁶³

⁵⁷ *Id.* at 15-16.

⁵⁸ *University of California Patent Policy*, University of California, http://www.ucop.edu/ott/patentpolicy/patentpo.html#pol.

⁵⁹ *Id*.

⁶⁰ *Id*.

⁶¹ *Id*.

⁶² *Id*.

⁶³ Schedule of Sponsor's Patent Rights, University of California Office of Technology Transfer, http://www.ucop.edu/ott/staff/sosprts.html.

The University of California Policy on Copyright Ownership identifies seven categories for copyrightable works, each with different rights assignments. In the case of scholarly works, the author retains the rights in the work.⁶⁴ In the case of sponsored research, which generally does not include the scholarly portion of the research, the copyright is held by the university, unless otherwise stated in the sponsorship agreement.⁶⁵

The remaining intellectual property matters are addressed in a set of guidelines that, allow for significant flexibility in the construction of contracts for sponsored research.⁶⁶

C.5.2 Specialized Funding Agency IP Policies

The state's current research portfolio includes (but is not limited to) funding in the following science and technology areas: energy, HIV-AIDS, breast cancer, tobacco-related disease, sustainable agriculture, health and human services, children and families, transportation, energy research, and geothermal resources development. It also includes funding for the California Institutes for Science and Innovation administered by the University of California. The largest single research program is the Public Interest Energy Research (PIER) program. Managed by the California Energy Commission, the PIER program is funded by a collection of surcharges on retail electricity sales.⁶⁷ The following table lists the major state funded R&D programs.

⁶⁴ *University of California Policy on Copyright Ownership*, University of California, http://www.ucop.edu/ott/staff/copyr.html.

⁶⁵ *Id*.

⁶⁶ Contract and Grant Manual, Intellection Property and Related Matters, University of California Office of Technology Transfer, http://www.ucop.edu/raohome/cgmanual/chap11.html#11-320.

⁶⁷ Policy Framework for Intellectual Property Derived from State-Funded Research: Final Report to the California Legislature (January 2006) p. 19.

Example of Major State Programs 2004-2005 (Thousands of	Dollars)		
	Amount	IP Process	
PIER *	62,500	Remains Property of Contractor	
Caltrans	55,600	Follows State or University Policy	
Natural Gas Research*	12,000	Remains Property of Contractor	
Child and Family Trust**	17,900	No Identified Policy	
Breast Cancer***	14,900	Follows UC Policies	
Tobacco-related Disease***	14,200	Follows UC Policies	
HIV-AIDS***	9,200	Follows UC Policies	
Sustainable Agriculture Research**	7,500	No Identified Policy	
Health and Human Services**	9,400	Available for Public Use	
Geothermal Resources Development*	2,500	Remains Property of Contractor	
TOTA	L 205,700		
Total State Funded R&D Approximately \$300 Million per y	ear		

In addition, \$300 Million per year has been allocated for the California Institute for Regenerative Medicine

The state government has also funded specific research programs including the California Institutes for Science and Innovation (at \$410 Million over five years), programs in Caltrans, Cal/EPA and others.

Sources: Compiled from numerous sources including the Governor's Budget for 2004-5; communication with the individual agencies and programs referenced; the California Department of Finance; and the Research Administration Group at the University of California Office of the President.

⁶⁸The

PIER program adheres to the following intellectual property policy:

- 1. All data produced by a contractor is the property of the contractor, subject to the California Energy Commission ("CEC") retaining a no-cost, non-exclusive, nontransferable, irrevocable, royalty-free, worldwide, perpetual license to use said data.
- 2. Patent rights for subject inventions is the property of the contractor, subject to the Energy Commission retaining a no-cost, nonexclusive, nontransferable, irrevocable, royalty-free, worldwide perpetual license to use the invention for governmental purposes.
- 3. Copyrightable work first produced under a research agreement with the PIER program is owned by the contractor, subject to the contractor granting the Energy Commission a royalty-free, no-cost, nonexclusive, irrevocable, nontransferable, worldwide, perpetual license to produce, translate, publish, use or dispose of said copyrightable work.⁶⁹

⁶⁹ *Id*.

^{*} Administered by the California Energy Commission.

^{**} Reported in Governor's budget 2004-2005.

^{***} Administered by the University of California.

⁶⁸ *Id*.

In consideration of the Energy Commission providing PIER program funding to a contractor, the contractor must agree to pay the CEC royalties for all project-related products and rights, as follows:

- 1. 1.5% of the sales price, for a 15-year period.
- 2. The contractor may do an "early buyout" of royalty payments by paying the CEC two times the amount of funds that were drawn down by the research project.⁷⁰

C.6 Colorado

C.6.1 University IP Policies

The entity that is tasked with governing state-sponsored institutions of higher education is the Colorado Commission on Higher Education. Overall, the commission is responsible for establishing policy for Colorado's system of public higher education. Colorado statute 23-1-106.5 mandates the duties of the commission concerning technology transfers between academia and industries. The commission is tasked with facilitating technology transfers through a research grant program, Technology Advancement Grant (TAG). This program aims to develop new technologies and materials in the universities' research laboratories in order to bring those technologies into the marketplace for the benefit of all Colorado residents. The commission also serves to evaluate the scientific value and potential commercial value of projects and award grant funds accordingly.

In accordance with the state law and policies mandated by the Board of Regents for the University of Colorado, the University maintains ownership of patentable inventions created by faculty, staff and students, where the work is supported by University funds or conducted in

⁷⁰ *Id*.

⁷¹ Colorado Commission on Higher Education Master Plan, available at http://www.state.co.us/cche/agenda/mayiva1.html (last visited on Mar. 20, 2007)

⁷² *Id*.

⁷³ *Id*.

⁷⁴ *Id*.

⁷⁵ *Id*.

⁷⁶ *Id*.

university operated facilities.⁷⁷ Patentable inventions arising from university funds and facilities must be disclosed to the Technology Transfer Office.⁷⁸ This office is responsible for reviewing the intellectual property disclosure within 90 days, and making a decision as to University interest in pursuing.⁷⁹ Where the intellectual property is owned by the university, the staff and faculty are prohibited from becoming directly involved in negotiating commercial agreements.⁸⁰ Instead, this responsibility lies with the Technology Transfer Office.⁸¹

C.6.2 Specialized Funding Agency IP Policies

No information discovered.

C.7 Connecticut

C.7.1 University IP Policies

In 2003-2004 in the state of Connecticut, the Governor's Competitiveness Council formed the Connecticut Technology Transfer and Commercialization Advisory Board, which consisted of leaders from the State's top universities, corporations, venture capital firms, and economic development organizations. One purpose of the board was to focus on building a state agenda for science and technology leadership. In a 2004 report to the Competitiveness Council, the board highlighted various university models for technology transfer and commercialization as a benchmark for Connecticut. The report was intended to lay the groundwork for future state, university, and corporate actions that leverage Connecticut's university research resources. The report found that Connecticut had not fully capitalized on its strengths, nor provided the

⁷⁷ <i>Id</i> .	
⁷⁸ <i>Id</i> .	
⁷⁹ <i>Id</i> .	
⁸⁰ Id.	
⁸¹ Id.	
⁸² Innovation Associates IP Report, available at: (last visited April 26, 2007).	http://www.youbelonginct.com/pupload/techtransreportweb.pdf
⁸³ Id.	
⁸⁴ Id.	
⁸⁵ <i>Id</i> .	

same level of investments as some competing states to stimulate innovation through early-stage funds, innovation centers, and university-based programs. Some recommendations for the state included seeking more federal funding to support targeted initiatives, increase state funding through angel and seed capital, and educate policy makers, in addition to other recommendations. It's not clear how much of the report has become state policy. Yet like many other states, Connecticut has promulgated policies concerning sponsored research.

Technology transfer policy is administered by the General Statutes of Connecticut section 10a-110 thru 10a-110g.⁸⁸ Pursuant to section 10a-110a, a management foundation is tasked with the responsibility of acquiring and disbursing funding towards technological research.⁸⁹ In addition, the foundation also files applications for patents and assigns licenses for the inventions.⁹⁰ The "entire beneficial ownership" of the research is vested in the University.⁹¹

The University of Connecticut's intellectual property policy is in accordance with Connecticut law. Under section 10a-110b of the General Statutes of Connecticut, the University of Connecticut is entitled to own the entire right, title, and interest of any invention created by University employees emerging from research conducted while performing University duties or which is created or developed with the use of University resources. This does not apply where a sponsor has existing patents or pending patent applications for technologies developed by the Sponsor outside the university. Under section 10a-110g of the General Statutes of Connecticut the University's copyright policy specifies that any copyrightable product of authorship protected

⁸⁶ *Id*.

⁸⁷ *Id*.

⁸⁸ General Statutes of Connecticut Technology Transfer Policies, available at http://www.cga.ct.gov/2007/pub/Chap185b.htm#Sec10a-110.htm (last visited on Apr. 1 2007.

⁸⁹ *Id*.

⁹⁰ *Id*.

⁹¹ *Id*.

⁹² Policy and Procedures Regarding Research Collaborations with Industrial Partners and Technology Transfer, available at http://www.rac.uconn.edu/techtransfer.html (last visited on Mar. 20, 2007)

⁹³ *Id*.

by actual or potential copyright belongs to the author(s). Where such works have been produced through the use of University resources the University may seek a reasonable return upon commercialization. Also, if copyrightable material is produced under a grant or sponsored research agreement awarded to the University and the University needs to fulfill a contractual obligation with its sponsor, the author is required to assign his/her rights to such copyright to the University. The University also requires students to assign rights to inventions occurring at the University if there was substantial use of university resources to develop the invention, where the student is performing services as part of employment at the university, and where the student is participating in sponsored research.

C.7.2 Specialized Funding Agency IP Policies

No information discovered.

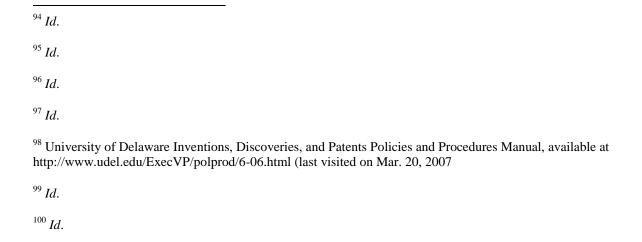
C.8 Delaware

C.8.1 University IP Policies

According to the University of Delaware's intellectual property policy, research that is funded by the government is treated in accordance with the provisions of the Bayh-Dole Act. ⁹⁸ University personnel who develop inventions while associated with the University must cooperate with the University in establishing the rights to the inventions. ⁹⁹ This policy is irrespective of inventions made with or without the use of university resources. ¹⁰⁰

C.8.2 Specialized Funding Agency IP Policies

No information discovered.



C.9 Florida

C.9.1 University IP Policies

In 2002, the Florida Senate introduced a bill concerning technology transfer. ¹⁰¹ The bill placed the burden of addressing technology transfer issues on the Florida Board of Education. ¹⁰² The bill recognized that technology transfer produces economic development benefits for the public and is a goal of the state. ¹⁰³ The bill sought to minimize the legal and policy barriers to technology transfer while making available more technology transfer resources. ¹⁰⁴ These goals are intended to be accomplished through the Florida Board of Education. ¹⁰⁵ The board was also tasked with creating mechanisms to increase University and industry interaction, and facilitating technology transfer-related collaboration between universities in the state. ¹⁰⁶ Intellectual property policy in the state is based on Florida Statutes section 1004.23, which authorizes Florida universities to license, protect, and deal with the work produced by their own personnel. ¹⁰⁷

At the University of Florida the intellectual property policy is based on section 1004.23, Fla. Stat. Accordingly, an invention created in a field in which the creator practices at the University or with the use of University resources, is the property of the University. The income however may be shared with the creator, arising from agreements with outside sponsors. This does not apply to inventions made outside the field in which the creator

¹⁰¹ Florida Senate 2002 Technology Transfer Bill available at http://www.leg.state.fl.us/data/session/2002/Senate/bills/billtext/pdf/s2278.pdf (last visited on Mar. 20, 2007)

102 Id.

103 Id.

104 Id.

105 Id.

106 Id.

107 Id.

108 University of Florida Intellectual Property Policy, available at http://rgp.ufl.edu/otl/pdf/ipp.pdf (last visited on Mar. 20. 2007).

109 Id.

110 Id.

practices at the University and for which no university resource have been utilized. ¹¹¹ A creator must nevertheless disclose all inventions, even those not involving university resources. ¹¹² Works and inventions developed through financial support from outside sponsors such as state and local governments are also the property of the University. ¹¹³

The Intellectual Property policies at Florida State University are very similar to the University of Florida's policies in that the University has the right to claim title to all inventions created by faculty and staff "within the scope of skill and activity implied by their duties." ¹¹⁴

C.9.2 Specialized Funding Agency IP Policies

No information discovered.

C.10 Georgia

C.10.1 University IP Policies

Intellectual property for Georgia's state-funded postsecondary education institutions is governed by the Board of Regents of the University System of Georgia's intellectual property policy. The Board of Regents' intellectual property policy dictates its institutions' rights to intellectual property ownership in the specific categories of sponsor-supported efforts, institution-assigned efforts, institution-assisted individual efforts, individual efforts, and other efforts. The Board of Regents requires that each institution of the System develop policies and procedures for the administration of its intellectual property policy, and that an intellectual property committee be appointed by the institution's president. The intellectual property

¹¹¹ Id.

¹¹² *Id*.

¹¹³ *Id*.

¹¹⁴ Florida State University Technology Transfer Policies, available at http://www.techtransfer.fsu.edu/policies.html (last visited on Apr. 1, 2007).

¹¹⁵ Board of Regents of the University System of Georgia, available at: http://www.usg.edu/regents/policymanual/600.phtml (last visited April 23, 2007); *see also* Georgia General Assembly—House Bill 606, available at: http://www.legis.state.ga.us/legis/2007_08/fulltext/hb606.htm (for infomation regarding Georgia's state code).

¹¹⁶ Board of Regents of the University System of Georgia, available at: http://www.usg.edu/regents/policymanual/600.phtml (last visited April 23, 2007).

¹¹⁷ Id.

committee is required to recommend to the president the rights and equities in intellectual property created by the institution's faculty, staff, or students. The Board of Regents allows an institution to form other committees to address specific intellectual property issues. 119

An institution may implement its intellectual property policy by: (1) developing develop and managing its licensing program through an independent assistance organization to secure competent evaluation of intellectual property, expeditious filing of applications for patents or other protection and aggressive licensing and administration of Intellectual Property; (2) developing and managing its licensing program through an affiliated nonprofit corporation such as the Georgia State University Research Foundation, Inc., the Georgia Tech Research Corporation or other nonprofit organizations established for this purpose; (3) developing and managing independently its own licensing program; or (4) releasing intellectual property to which the institution has title or an interest to the inventor or creator for management and development as a private venture after the execution of an agreement providing for a suitable division of royalty income. 120 Revenue and equity distribution for intellectual property invented under institution and sponsored efforts are governed generally by the Board of Regents and specifically by the individual institutions. 121 The Board of Regents maintains no specific policy regarding conflicts of interest or equity management and distribution, but individual institutions may maintain such policies in accordance with the Board of Regent's general intellectual property policy. 122

C.10.2 Specialized Funding Agency IP Policies

No information discovered.

C.11 Hawaii

C.11.1 University IP Policies

118	Id.		
119	Id.		
120	Id.		
121	Id.		
122	Id.		

In 1965, the Hawaiian Legislature established (under 304A-3001-3011 of the Hawaii Revised Statutes) a state agency known as the Research Corporation of the University of Hawaii ("RCUH"). For administrative purposes, RCUH was attached to the University of Hawaii through an internal agreement which defines the basic responsibilities of each party and the financial arrangement to pay for the cost of services rendered by each party. RCUH's services include: advance funding, equipment loans, tax reporting, liability/specialty insurance coverage, accounts payable/receivable, equipment accountability, final fiscal reporting, training, employee hiring/compensation/health benefits/insurance/etc., payroll, leases/rentals, and other business transactions. 125

RCUH hires personnel and procures goods and services on behalf of its clients. The University of Hawaii is RCUH's primary client, but other clients include other state agencies, and private research and training organizations. RCUH maintains its own personnel, payroll, accounting, and disbursing systems, all independent of the state and University systems, allowing RCUH to process transactions expeditiously, which in turn makes it possible for researchers to focus more on research rather than administration. RCUH receives no state funding, and supports itself through fees charged for its services.

RCUH is controlled by general management and a Board of Directors consisting of ten members (five members appointed by the Government, and confirmed by the Senate, and five members of the University of Hawaii Board of Regents selected by the Board of Regents). The President of the University of Hawaii also serves as the President of RCUH, while an executive director runs the day-to-day affairs of the Corporation. RCUH maintains a "core"

¹²³ The Research Corporation of the University of Hawaii, *Mission and Goals*, available at: https://securercuh01.rcuh.com/000168d/rcuh1.nsf/Site+Documents/About+RCUH+Mission (last visited April 23, 2007).

¹²⁴ *Id*.

¹²⁵ *Id*.

¹²⁶ *Id*.

¹²⁷ *Id*.

¹²⁸ *Id*.

¹²⁹ *Id*.

¹³⁰ *Id*.

staff of approximately thirty employees in the departments of Accounting,
Disbursing/Purchasing, Human Resources, Project Management, and the Executive Director's
Office. At any given time, there are on average 2,200 project personnel on RCUH's payroll.

Through its intellectual property policy, RCUH claims complete ownership of all intellectual property by anyone working under an RCUH direct project, maintain the right to patent any invention where RCUH is a contractor or grantee, following applicable laws. RCUH also maintains disclosure, licensing, and reassignment provisions in its intellectual property policy. 132

Keeping in mind the unique relationship between the University of Hawaii and the RCUH mentioned above, the University of Hawaii has its own intellectual property policy. All persons employed by the University of Hawaii are required to submit ideas for patentable inventions, and must follow specific rules and deadlines to do so. ¹³³ The University will relinquish its rights to the inventor in the case that the invention is judged by the patent as personal or private research; or the University decides not to secure a patent for an invention which is a result of personal or private research. ¹³⁴ The University intellectual property policy contains various sections dictating their rights with regard to inventions resulting from personal or private research, research supported by state funds, and research supported by an outside agency. ¹³⁵ The University of Hawaii distributes royalties to the inventor, the inventor's unit, and the University of Hawaii in different variations depending on the amount of net royalties, with the greater the net royalties resulting in the greatest percentage going to the University and the inventor's unit, and the smallest percentage going to the inventor. ¹³⁶ For example, when net royalties are less than \$100,000, the inventor receives 66.67 percent of net royalties, but only

¹³¹ *Id*.

¹³² The Research Corporation of the University of Hawaii, *Policies and Procedures*, available at: https://securercuh01.rcuh.com/000168d/rcuh1.nsf/7b1e3e85b13603260a2564d6001576fd/c9a29d8dbaecc2820a2570 d60004c223?OpenDocument (last visited April 23, 2007).

¹³³ University of Hawai'i—Office of Technology Transfer & Economic Development, *University of Hawai'I Patent and Copyright Policy*, available at: http://www.mic.hawaii.edu/faculty/borpolicy.html (last visited April 23, 2007).

¹³⁴ *Id*.

¹³⁵ *Id*.

¹³⁶ University of Hawai'i—New Distribution Formula for UH Royalties Memorandum, available at: http://www.mic.hawaii.edu/gainsmemo-opt.pdf (last visited April 23, 2007).

receives 33.33 percent of net royalties when the net royalties are greater than \$300,000. 137 The University of Hawaii requires the reporting of conflicts interest and appears to have no specific policies regarding equity distribution. 138

C.11.2 Specialized Funding Agency IP Policies

No information discovered.

C.12 Idaho

C.12.1 University IP Policies

While Idaho does not maintain any intellectual property policies, the state still plays a role in managing the intellectual property policies of state-financed colleges and universities through the Idaho State Board of Education.¹³⁹ While each post-secondary institution may be governed by their own specific or unique intellectual property policies, it appears that Idaho's state university intellectual property policies are governed at least in part by intellectual property policies and rules set by a State Board made up of the State Board of Education (on behalf of the State of Idaho) and the Board of Regents (on behalf of the University of Idaho).¹⁴⁰ Institutions affected by the State Board's intellectual property policies are Boise State University, Idaho State University, Lewis-Clark State College, the University of Idaho, and Eastern Idaho Technical College.¹⁴¹ The State Board claims ownership of any invention or patentable discovery developed under any work performed by an employee of the State Board that meet specified criteria, and maintains other regulations involving the submission, reporting, review, and assignments of patentable inventions.¹⁴²

¹³⁷ *Id*.

¹³⁸ University of Hawai'i—Office of Technology Transfer & Economic Development, *University of Hawai'I Patent and Copyright Policy*, available at: http://www.mic.hawaii.edu/faculty/borpolicy.html (last visited April 23, 2007).

¹³⁹ Idaho State Board of Education, *Policies and Procedures-Intellectual Property*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

¹⁴⁰ *Id*.

¹⁴¹ Idaho State Board of Education, *Policies and Procedures-Policy Making Authority*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

¹⁴² Idaho State Board of Education, *Policies and Procedures-Intellectual Property*, available at: http://www.boardofed.idaho.gov/policies/v/m.asp (last visited April 23, 2007).

The State Board delegates to Idaho's post-secondary educational institutions the right to transfer and convey ownership in intellectual properties developed within the institutions under the patents and copyright rule. 143 The intent of the patents and copyright rule is to allow Idaho's post-secondary institutions the ability to play appropriate roles in knowledge transfer and economic growth and development. 144 This rule allows the institutions to (1) grant rights to owned intellectual properties to research foundations for further development or transfer; (2) themselves act as licensors to convey intellectual property rights to commercial ventures; (3) grant exclusive rights to a licensee; (4) collect and disburse license payments to inventors and their departments and colleges, as well as to their institution for the general support of research within the institutions; and (5) permit institutional employees the right to participate in ownership and governance of companies licensed by the institutions to produce and market the discoveries, provided the conflict of interest rules are followed. 145 The State Board's conflict of interest policy states that employees must disclose, on a continuing basis, all their relationships and business affiliations that reasonably could giver rise to a conflict of interest because of their duties and/or responsibilities in that business. 146 It does not appear that the State Board has any policies governing equity distribution, although individual institutions may supplement their own policies with such provisions.

C.12.2 Specialized Funding Agency IP Policies

No information discovered.

C.13 Illinois

C.13.1 University IP Policies

The University of Illinois System ("University") maintains an intellectual property policy for its three university campuses (Chicago, Springfield, and Urbana-Champaign). The University of Illinois System's Intellectual Property policy maintains that intellectual property shall belong to the University if it was invented or made by: (1) a University employee, as a

¹⁴³ *Id*.

¹⁴⁴ *Id*.

¹⁴⁵ Idaho State Board of Education, *Memo on Intellectual Property Policy*, available at: http://www.boardofed.idaho.gov/meetings/2001/May01/itemb4a.pdf (last visited April 23, 2007).

¹⁴⁶ *Id*.

result of her duties, or (2) any person that used University facilities to create the intellectual property. 147

The policy also governs the Universities' intellectual property interests with regard to disclosure of the creation of intellectual property, evaluation of decisions, rules regarding the abandonment of the intellectual property, rules regarding the University's acceptance of independently owned intellectual property, consulting agreements, and appeals. The policy allows the University to license intellectual property at its own discretion, on an exclusive or non-exclusive basis, so long as it is consistent with the public interest. The policy maintains that intellectual property may only be licensed to licensees who show technical and business capabilities. The policy also maintains a conflict of interest police subjecting University employees to review of potential conflicts of interest and commitment issues and approval of conflict management plans that coincide with University policy.

The president has the ultimate authority for the stewardship of intellectual property developed at the Universities, with the vice president for technology and economic development having a direct line of authority for University offices and entities involved in technology commercialization. The president and vice president for technology shall consult with chancellors and vice-chancellors regarding intellectual property issues. The University also maintains a University Intellectual Property Committee which is appointed by the president every year to make recommendations concerning intellectual property issues. 154

The University's policy for the distribution of proceeds received from intellectual property revenue, distributes 40% of revenue to the creator, 40% to the University, and 20% to

¹⁴⁹ *Id*.

¹⁵⁰ *Id*.

¹⁵¹ *Id*.

¹⁵² *Id*.

¹⁵³ *Id*.

¹⁵⁴ *Id*.

¹⁴⁷ University of Illinois, Policies—*Article III, Intellectual Property*, available at: http://www.uillinois.edu/trustees/rules.html#art3 (last visited April 23, 2007).

¹⁴⁸ *Id*.

the originating unit.¹⁵⁵ The University also maintains an equity distribution clause which distributes equity received from an agreement with a corporation or other business entity to exploit intellectual property owned by the University among the creators, the University, and the originating unit in the same percentages as listed above.¹⁵⁶ A creator is not entitled to proceeds if the University accepts research support in the form of a sponsored research agreement of unrestricted grant as part of the consideration in an intellectual property license in place of an option fee, license fee, or royalty.¹⁵⁷

C.13.2 Specialized Funding Agency IP Policies

No information discovered.

C.14 Indiana

C.14.1 University IP Policies

Indiana University is recognized as a state university of Indiana under Indiana Code 20-12-23-1. 158

Indiana University (IU) has an intellectual property policy that is similar to other universities across the nation. The creator of an invention must assign the rights applicable in intellectual property to IU.¹⁵⁹ Of the first \$100,000 made, the inventor receives 50%, the inventor's campus receives 25%, and the University receives 25%. Of the next \$300,000 made, the inventor receives 40%, the campus receives 25%, and the University 35%. Of the next \$600,000 the inventor receives 30%, the campus 25%, and the University 45%. For

<sup>Id.
Id.
Id.
Indiana Code 20-12-23 available at http://www.in.gov/legislative/ic/code/title20/ar12/ch23.html (last visited April 21, 2007).
Research at IU, available at http://www.research.indiana.edu/respol/intprop.html#2 (last visited April 21, 2007).
Id.
Id.
Id.</sup>

revenues exceeding \$1,000,000, the inventor receives 25%, the campus 25%, and the University receives 50%. ¹⁶³

Furthermore, Indiana University shall own all equity rights in the intellectual property. If monetary proceeds are generated by the sale of equity interests, they will be distributed according to the revenue policy listed above. Indiana University will set aside a portion of the equity interests which is equal in value to the costs incurred by the University for obtaining intellectual property protection for the technology in question.

C.14.2 Specialized Funding Agency IP Policies

No information discovered.

C.15 Iowa

C.15.1 University IP Policies

The University of Iowa is codified under Chapter 263 of the Iowa Code. The state of Iowa does not have a comprehensive intellectual property policy but the University of Iowa does.

The University of Iowa assumes ownership of patents on inventions created by its employees through a designee, the University of Iowa Research Foundation (UIRF). ¹⁶⁶ If the invention is a product of federal funds, then the assertion of ownership stems from federal law. ¹⁶⁷ Furthermore, the policy applies to technology made by University employees or postdoctoral appointees in the course of their employment or appointment or in a field or discipline reasonably related to the inventor's field of employment or appointment. ¹⁶⁸ Also, the policy applies to inventions enabled by significant use of University resources when made by University employees, postdoctoral appointees, students whose inventive contribution did not

<sup>Id.
Id.
Id.
Id.
Id.
University of Iowa Intellectual Property Policy, available at http://www.uiowa.edu/~our/opmanual/v/30.htm#303 (last visited April 21, 2007).
Id.
Id.</sup>

arise from employment by the University, or institutional visitors not employed by the University. 169

Under the University policy, the first \$100,000 of income will go to the inventor. After that, 25% to the inventor, 25% to UIRF, 20% to a research enrichment fund (REF), 15% to the department from which the invention originated, and 15% to the college from which the invention was created. When the annual income is greater than \$10 million, the next \$5 million in annual income is distributed accordingly: 25% to the inventor; 20% to UIRF; 16% to REF; 12% to the originating department; 12% to the originating college; and 15% to the University.

C.15.2 Specialized Funding Agency IP Policies

No information discovered.

C.16 Kansas

C.16.1 University IP Policies

The state of Kansas does not have a comprehensive intellectual property policy. However the University of Kansas

The University of Kansas has a policy for inventions that have an actual or projected market value in excess of \$10,000.¹⁷² The ownership rights in such inventions can be assigned to an independent organization for the purposes of promoting research and development of the intellectual property.¹⁷³ One third of the revenue accumulated from the technology is awarded to the inventor. One third is given to KU Center for Research, and the last third is awarded to the inventor's department.¹⁷⁴ If any revenue has been made from the invention by means of royalties,

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    <sup>169</sup> Id.
    <sup>170</sup> Id.
    <sup>171</sup> Id.
    <sup>172</sup> Kansas Board of Regents – Acad
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¹⁷² Kansas Board of Regents – Academic Policies, available at http://www.kansasregents.org/academic/policy/intel.html (last visited April 21, 2007).

¹⁷³ *Id*.

¹⁷⁴ Technology Transfer Revenue Distribution Policy, available at http://www.rcr.ku.edu/coi/revenue_dist/revenue_dist.shtml (last visited April 21, 2007).

licensing fees, or other charges, no less than 25% of the revenues are to be paid to the inventor.¹⁷⁵

Furthermore, an inventor who participates in founding a company may receive Founder's equity and shall also receive the inventor's share of revenue from licensing University of Kansas technology to that corporation.¹⁷⁶

C.16.2 Specialized Funding Agency IP Policies

No information discovered.

C.17 Kentucky

C.17.1 University IP Policies

Kentucky does not have a statewide intellectual property policy. However, the Kentucky Cabinet for Economic Development has undertaken several policies to help foster the growth of technology in their state. Furthermore, the University of Kentucky has a comprehensive commercialization policy.

The University of Kentucky has its own intellectual property policy. Under this policy, intellectual property consists of anything patentable, copyrightable, and biological materials such as cell lines. All rights in the intellectual property are owned and controlled by the University of Kentucky Research Foundation (UKRF). UKRF then gives Kentucky Technology, Inc. (KTI), 100% owned by UKRF, a right of first refusal on intellectual property disclosures in exchange for a license fee to be paid by KTI to UKRF. Net calendar year royalty or license income derived from commercialization is shared as follows: 40% to the originator, 20% to the

¹⁷⁵ Kansas Board of Regents – Academic Policies, available at http://www.kansasregents.org/academic/policy/intel.html (last visited April 21, 2007).

¹⁷⁶ Technology Transfer Revenue Distribution Policy, available at http://www.rcr.ku.edu/coi/revenue dist/revenue dist.shtml (last visited April 21, 2007).

¹⁷⁷ University of Kentucky Intellectual Property Disposition, available at http://www.uky.edu/Regulations/AR/ar034.pdf (last visited April 21, 2007).

¹⁷⁸ *Id*.

¹⁷⁹ *Id*.

originators department or immediate administrative unit, 20% to the dean of the originator's college, and 20% to UKRF. 180

C.17.2 Specialized Funding Agency IP Policies

The Enterprise Fund is a set of four programs aimed to attract research and development work. The Kentucky Research and Development Voucher Program provides state funds to small and medium sized companies to undertake research and development work with a Kentucky university. This voucher provides an award of \$200,000 over two years. The Kentucky Rural Innovation Program provides seed funds to rural Kentucky businesses to conduct research and development and entrepreneurial innovation in partnership with a Kentucky post secondary institution. The ICC Concept Pool provides grants of up to \$25,000 to assist businesses and individuals at the earliest states of project feasibility and concept development. The Gap Fund/Executive in Residence Program provides follow-on funding of up to \$400,000 for previously funded high-performing qualified companies and must be matched by the company, which occurs generally as part of a new, minimum \$1 million round.

C.18 Louisiana

C.18.1 State University IP Policies

The Office of Sponsored Programs has a standard research agreement template modeled after the "Simplified and Standard Model Agreements for Industry-University Cooperative Research," which was a joint effort of the Government-University-Industry-Research Roundtable of the National Academy of Sciences and the Industrial Research Institute. ¹⁸⁵ The intent of the

¹⁸⁰ *Id*.

¹⁸¹ The Kentucky Cabinet for Economic Development, available at http://www.thinkkentucky.com/DCI/DCIStateRes.aspx (last visited April 21, 2007).

¹⁸² *Id*.

¹⁸³ *Id*.

¹⁸⁴ *Id*.

¹⁸⁵ Office of Intellectual Property, Commercialization and Development, *Frequently Asked Questions*, Available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/FAQs?OpenDocument#sponres, (last visited Mar. 7, 2007).

standard research agreement is to streamline the negotiation process and to decrease the time and effort required to reach an agreement among the parties which are involved. 186

As a general rule, anything an employee invents belongs to LSU, regardless of time of the day, day of the week, or month of the year; and regardless of whether LSU equipment and other resources were used when the invention was conceived or reduced to practice. There is a narrow exception for some inventions unrelated to the employee's field of expertise. The exception arises when the invention is created on a University employee's own time, without the use of LSU facilities or funds, and is in an area or field that has nothing to do with the inventors LSU position. 188

Ownership of intellectual property which is the result of University-Assisted or Assigned research is as a general rule reserved to LSU. Ownership of intellectual property which is the result of outside sponsorship will depend on the details of the individual research contract or agreement. In general, LSU retains title to intellectual property rights but may grant the sponsor the first opportunity to license the technology under commercially reasonable terms after negotiation. 190

The policy states that title to inventions resulting from federal government sponsored research belongs to LSU. ¹⁹¹ When a patent on such an invention is issued to LSU, the federal government has a royalty-free license to use the invention. ¹⁹² All state sponsored research is owned by LSU outright. ¹⁹³

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<sup>186</sup> Id.

<sup>187</sup> Id.

<sup>188</sup> Id.

<sup>189</sup> Id.
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¹⁹¹ Office of Intellectual Property, Commercialization and Development, *Inventors and Researchers: Policies and Procedures*, available at: http://appl003.lsu.edu/oip/oip.nsf/\$Content/Policies+and+Procedures?OpenDocument, (last visited Mar. 3, 2007).

¹⁹² *Id*.

¹⁹³ Id.

C.18.2 Specialized Funding Agency IP Policies

No information found.

C.19 Maine

C.19.1 University IP Policies

On September 29, 1986 the Board of Trustees for the University of Maine System approved their "Statement of Policy Governing Patents & Copyrights." The objectives of the policy are to determine the rights of the University, scholars, and sponsors with relation to intellectual property, to increase incentive for the University community to create "intellectual effort," and to recognize the right of authors and inventors to realize tangible benefits from intellectual property. ¹⁹⁵

Upon the University making the determination to exercise its right to intellectual property, the policy states that it will do so quickly to obtain legal protection, to search and initiate negotiations with potential licensees, or to take appropriate steps to bring the development into commercial use. When determining the rights and obligations that result from a new development, the degree of University involvement is first determined. Rights and obligations stem from individual efforts, University-assisted efforts, University-assigned efforts, outside sponsorship, or federal government sponsorship. 197

The University will not assert claims on income from copyrights or patents developed from the individual efforts of its employees. Individual efforts resulting in intellectual property are considered research conducted wholly at the expense of the scholar, on the scholar's own time, with no use or only incidental use of University facilities, equipment, or materials. ¹⁹⁸ If the

¹⁹⁴ Office of Research and Sponsored Programs-University of Maine System, *Statement of Policy Governing Patents & Copyrights*, Available at: http://orspdocs.umesp.maine.edu/Policies/Patents.htm, (last visited Mar. 3, 2007).

¹⁹⁵ *Id*.

¹⁹⁶ Office of Research and Sponsored Programs-University of Maine System, *Statement of Policy Governing Patents & Copyrights*, Available at: http://orspdocs.umesp.maine.edu/Policies/Patents.htm, (last visited Mar. 3, 2007).

¹⁹⁷ Id.

¹⁹⁸ *Id*.

scholar can demonstrate that these criteria are met, the University, if requested to do so, will waive any claims to the intellectual property. 199

University-assisted efforts resulting in intellectual property are considered research involving more than incidental use of University facilities, equipment or materials. The policy presumes an equity interest on the part of both the scholar and the University. Ownership resides with the University, but the scholar maintains the right to share in any resulting income. The University may waive its interest to permit the property to be exploited at the inventor's expense, but in such cases, a royalty-free license is granted to the University for its own scholarly and educational purposes because of the use of its facilities in the creation of the intellectual property. Income realized from copyrights or patents resulting from University-assisted work under the policy are divided as follows: 1)15% of gross income to the scholar; 2) 5% of gross income to the scholar's department, or other administrative unit; and 3) 80% to the University.

University-assigned efforts resulting in intellectual property are considered research by scholars which have been specifically assigned to the University, or which were a result of the University financing the scholar's time, or through the direct and significant use of University facilities, equipment, or materials.²⁰⁴ In this case a determination of ownership is made by the University and will likely be assigned to a competent agency, firm, or foundation with which the University has a publishing, evaluation or exploitation agreement.²⁰⁵ Income realized from patents resulting from University-assisted work under the policy is divided as follows: 1) 15% of gross income to scholar (or divided equally among multiple scholars); 2) 5% of gross income to the scholar's department, or other administrative unit; and 3) 80% to University.²⁰⁶

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<sup>199</sup> Id.
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²⁰⁰ Id.

²⁰¹ *Id*.

²⁰² *Id*.

 $^{^{203}}$ *Id*.

²⁰⁴ *Id*.

²⁰⁵ *Id*.

²⁰⁶ *Id*.

Outside sponsorship which results in intellectual property is considered research financed wholly or partially by industrial, philanthropic or other organizations, or by individuals.²⁰⁷ Ownership of such intellectual property is handled according to the terms of the contract, grant or other agreement governing the work. Income derived from copyrights or patents developed as a result of outside sponsorship is allocated in accordance with the terms of the contract or agreement. Any income paid to the University is divided as follows: 1) 15% of gross income to scholar; 2) 5% of gross income to the scholar's department or other administrative unit; and 3) 80% to University.²⁰⁸

C.19.2 Specialized Funding Agency IP Policies

The "Maine Intellectual Commons" is a project of the University of Maine advocating and promoting open access to scholarly and creative work.²⁰⁹ The project proposes open license terms and copyright policies.²¹⁰ The goal of the group is to create an institutional policy where intellectual property clearly resides with creators, and encourages those creators to place their work in the public domain or open access licensing environments.²¹¹ Although the emphasis of the project is making published scholarship open to avoid the increasing expense to universities for such scholarship, and not the innovation and exploitation of new technologies, the emphasis of this project could evolve into a future University patent policy and further demonstrates an example of the open source agenda.²¹²

C.20 Maryland

C.20.1 University IP Policies

No state statutes or regulations were found addressing a state university intellectual property policy for the state of Maryland. Current state code legislation concerning Maryland

²⁰⁷ *Id*.

²⁰⁸ *Id*.

²⁰⁹ The Maine Intellectual Commons: Establishing New Standards for Scholarly and Creative Access, *Welcome*. Available at: http://commons.umaine.edu/home.html, (last visited Mar. 8, 2007).

²¹⁰ *Id*.

²¹¹ *Id*.

²¹² See, The Maine Intellectual Commons: Establishing New Standards for Scholarly and Creative Access, *Welcome*. Available at: http://commons.umaine.edu/home.html, (last visited Mar. 8, 2007).

Stem Cell Research specifically provides that grants for research will be given "consistent with federal and State law, [which] reflects the intellectual property policies of the institution." The language states that grant monies are provided pursuant to relevant law and the institution's intellectual property policy, seeming to mean that the intellectual property policies reside with the institutions, not with the state of Maryland.

The University System of Maryland's intellectual property policies are stated in the "Consolidated USM and UM Policies and Procedures Manual," and were approved by the Board of Regents on February 8, 2002.²¹⁴ The policy's stated objective is to establish and maintain the interests of the creators, the University, and the public through full and fair dissemination of the protected knowledge.²¹⁵

Sponsored research agreements provide that all intellectual property developed under such an agreement belong to the University. ²¹⁶ However, the University, on a case-by-case basis may agree to assign ownership or licensing rights to the sponsor, subject to the University's right to use and reproduce the intellectual property for research and educational purposes.²¹⁷

Any research project that is funded, in whole or in part, by a federal agency is subject to specific federal statutes and regulations. ²¹⁸ Those regulations generally allow the University to elect title to any invention that is conceived of or first actually reduced to practice in the performance of federally funded research with the purpose of commercializing the invention, subject to the government's rights which include reservation of a nonexclusive license to use the invention world-wide for government purposes.²¹⁹

C.20.2 Specialized Funding Agency IP Policies

²¹³ MD Code, Art. 83A, § 5-2B-08.

²¹⁴ Office of Technology Commercialization Division of Research, Consolidated USM and UM Policies and Procedures (effective July 1, 2002), Available at: http://www.otc.umd.edu/umpolicies/usmpoliciesafterjuly12002.html, (last visited Mar. 7, 2007).

²¹⁵ *Id*.

²¹⁶ *Id*.

²¹⁷ *Id*.

²¹⁸ *Id*.

²¹⁹ Id.

No information found.

C.21 Massachusetts

C.21.1 University IP Policies

The University of Massachusetts disperses non-equity revenue derived from commercialization, after the University is reimbursed for any out-of-pocket expenses incurred in obtaining and maintaining patent protection for intellectual property, and evaluating and marketing such intellectual property. The remaining net income is distributed as follows: 1) 15% to the University Office of Commercial Ventures and Intellectual Property (CVIP) to fund patents, CVIP operations, and research grants; 2) 30% to the inventor or creator; 3) 15% to the University entity or entities that provided the resources for development of the Intellectual Property, to fund research and scholarship; and 4) 40% to the college of the inventor or creator to fund research and scholarship. ²²¹

C.21.2 Specialized Funding Agency IP Policies

The Harvard Office of Technology Transfer and the Office of Sponsored Research (Harvard) are charged to introduce University-developed intellectual property into public use by collaborating with private industry sponsors and generating financial return to the University while protecting academic freedoms.²²²

The sponsor and Harvard negotiate the terms of a license agreement for disclosed intellectual property in good faith within a negotiable time period from the date of notification of discovery or invention.²²³ The Harvard license agreement requires the licensee to use its best efforts to introduce products incorporating the licensed technology into public use as rapidly as

Harvard University, Office of Technology Transfer Mission, *at* http://www.techtransfer.harvard.edu/MissionStatement.html (last visited Mar. 16, 2007).

See also, University – Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research. New York State Science and Technology Law Center, Syracuse College of Law, (Dec. 2006).

²²⁰ UMass.edu, University of Massachusetts Intellectual Property Policy, *Available at*: http://www.umass.edu/research/intelfac.html, (Last visited Mar. 16, 2007).

²²¹ *Id*.

²²³ Harvard University, Office of Technology Transfer Mission, *at* http://www.techtransfer.harvard.edu/MissionStatement.html (last visited Mar. 16, 2007).

practicable, for a royalty that is usual and customary in the particular field. Harvard's standard royalty distribution policy states that for the first \$50,000 of net income: 1) 35% to inventors as a group; 2) 30% to the inventor's department; 3) 20% to the Dean of the inventor's School; and 4) 15% to the University.²²⁴

Generally, half the departmental share is placed in a special account under the control of the inventor(s). There is a slightly different formula applied to cumulative net income over \$50,000: 1) 25% to the inventors as a group; and 40% to the inventor's department, but the rest of the distribution remains the same. ²²⁵

In 2005, the Massachusetts Institute of Technology (MIT) had a research budget of over \$1 billion. 226 Of that budget, \$60.5 million was from collaboration with private industry sponsors. 227 Gross revenue for the same fiscal year was \$46 million, of which royalties accounted for 75% (or \$35.3 million). Notably, MIT grants 20% of its licenses to startup companies. Royalty income received for a technology license is generally distributed after the Technology Licensing Office expenses and costs associated with filing, prosecuting, and maintaining patents have been deducted. After these expenses have been deducted the inventor(s) receives one third, and the department receives the remaining two thirds of the

²²⁴ Techtransfer.Harvard.edu, Royalty Sharing Policy, *Available at*: http://www.techtransfer.harvard.edu/RoyaltySharing.html, (last visited Mar. 16, 2007).

²²⁵ Id.

²²⁶ Massachusetts Institute of Technology, Office of Sponsored Programs, MIT Standard Consortium Agreement, Available at http://web.mit.edu/tlo/www/qfa.html (last visited Mar. 2, 2007).

²²⁷ Id.

²²⁸ Id.

²²⁹ Massachusetts Institute of Technology, Office of Sponsored Programs, MIT Standard Consortium Agreement, Available at http://web.mit.edu/tlo/www/qfa.html (last visited Mar. 2, 2007). See also, University – Industry Sponsored Research: Opportunities and Obstacles, A Report Prepared for the New York State Office of Science, Technology and Academic Research. New York State Science and Technology Law Center, Syracuse College of Law, (Dec. 2006).

²³⁰ Web.mit.edu, Guide to the Ownership, Distribution, Commercialization Development of M.I.T. Technology, *Available at*: http://web.mit.edu/tlo/www/community/guide4.html#4.1, (Last visited Mar. 13, 2007).

royalty income.²³¹ Generally, money received by the department is then divided equally between the department and the MIT General Fund.²³²

C.22 Michigan

C.22.1 University IP Policies

Also, the public universities of Michigan do not have a uniform intellectual property policy; each university has its own. The public university system of Michigan is established under the Constitution of the state of Michigan.²³³ The Constitution provides that a corporate body known as the Regents of the University of Michigan.²³⁴ The board consists of members from the University of Michigan, Michigan State University, and Wayne State University.²³⁵ A board from each institution has the power of general supervision of the university and the control and direction of all expenditures from the institutions funds.²³⁶

An example of a public university's intellectual property policy is that of the University of Michigan. The University of Michigan consistently ranks as a top university in the United States for research and development and therefore has a developed intellectual property policy. The policy is divided into several sections: Ownership rights, disclosure, commercialization, revenue distribution, granting of rights back to inventors, appeals, conflicts of interest, and definitions. ²³⁸

Ownership of intellectual property made by any person with the direct or indirect support of University funds is granted to the University.²³⁹ The University will generally retain

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    <sup>231</sup> Id.
    <sup>232</sup> Id.
    <sup>233</sup> MCLS Const. Art. VIII, § 5
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²³⁴ *Id*.

²³⁵ *Id*.

²³⁶ *Id*.

²³⁷ Research and Development, available at: http://www.michigan.org/medc/ttc/ResearchAndDevelopment/ (last visited March 11, 2007)

²³⁸ University of Michigan Technology Transfer Policy, available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007)

²³⁹ Id.

ownership of any intellectual property produced by employees while on any type of leave if they are receiving salary from the University, but some exceptions to this rule may be approved by the Vice President of Research. The University will generally not claim ownership of intellectual property created by a student unless it is created by a student in their capacity as an employee of the University or with direct or indirect support of University funds. ²⁴¹

To comply with federal law, employees of the University have an obligation to disclose any intellectual property promptly and completely to the University's Office of Technology Transfer (OTT).²⁴² Disclosure includes a summary of the intellectual property and naming all inventors and persons who may have contributed to the making of the intellectual property.²⁴³ Employees who believe they have created patentable intellectual property that is not owned by the University cannot commercialize those inventions without providing thirty days notice and written summary of the invention to OTT.²⁴⁴ Such a disclosure is not necessary, however, when the work is a scholarly work which is governed by the University Copyright Policy, or is the result of work that is clearly outside of the employee's field of work and his/her University responsibilities.²⁴⁵

OTT has the ultimate authority regarding decisions concerning the route of commercializing or transferring intellectual property, including the usage of legal counsel and outside resources to assist the commercialization process.²⁴⁶ OTT has this right for University-owned patent rights, computer software and other copyrightable materials, and tangible materials.²⁴⁷

Revenue distribution generated by the licensing of University-owned intellectual property is intended to provide incentives for employee participation in the licensing process and to

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    240 Id.
    241 Id.
    242 Id.
    243 Id.
    244 Id.
    245 Id.
    246 Id.
    247 Id.
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support further investment in research for the technology.²⁴⁸ After the recovery of University expenses, aggregate revenues are specified in the policy.²⁴⁹ It is generally expected that the revenue will be used for educational purposes or investment in commercialization activities.²⁵⁰ After the recovery of University expenses, aggregate revenues resulting from royalties and sale of equity interest are shared as follows:

Up to \$200,000:

50% to the Inventor

17% to the Inventor's department

18% to the Inventor's college

15% to the central University Administration

Over \$200,000 (and up to \$2,000,000):

30% to the Inventor

20% to the Inventor's department

25% to the Inventor's school or college

25% to the central University administration

Over \$2,000,000

30% to the Inventor

35% to the Inventor's school or college

35% to the central University's administration²⁵¹

In the event that an inventor changes departments or universities, the University has discretion to distribute the revenue, although it is generally expected that the revenue will be used for educational purposes or investment in commercialization activities.²⁵²

The University may at its discretion elect to assign or license its rights in the Universityowned intellectual property back to one or more of the inventors when permissible under

²⁴⁸ *Id*.

²⁴⁹ *Id*.

²⁵⁰ *Id*.

²⁵¹ *Id*.

²⁵² *Id*.

University policies and state and federal laws.²⁵³ OTT should attempt to seek approval of all of the inventors, but it is not required.²⁵⁴ Additionally, OTT is not required to market, protect and license the intellectual property where the rights have been granted back to the inventors.²⁵⁵

The University may at its discretion elect to assign or license its rights in the University-owned intellectual property back to one or more of the inventors when permissible under University policies and state and federal laws. ²⁵⁶ If the University assigns ownership to the owner, consideration of out-of-pocket University expenses, 15% of royalties, equity, or other value must be given to the University. ²⁵⁷ There is not a provision for the inventor to participate as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property. ²⁵⁸

The University of Michigan's policy subjects the University and its employees to the Conflicts of Interest policies of the University and the State of Michigan Conflict of Interest Statute.²⁵⁹

C.22.2 Special Funding Agency IP Policies

Michigan recently created a fund for the development of intellectual property through the use of its share of tobacco settlement money. ²⁶⁰ The Governor of Michigan signed an initiative into law in 2005: The 21st Century Jobs Initiative Program (the Fund). ²⁶¹ The purpose of the program, funded by tobacco settlement revenue, is to create thousands of job opportunities in

²⁵³ *Id*.
²⁵⁴ *Id*.
²⁵⁵ *Id*.
²⁵⁶ *Id*.
²⁵⁷ *Id*.
²⁵⁸ *Id*.
²⁵⁹ *Id*.
²⁶⁰ State Leaders Highlight 21st Cen

²⁶⁰ State Leaders Highlight 21st Century Jobs Fund, available at: http://www.michigan.gov/som/0,1607,7-192-26847-130900--,00.html (last visited March 11, 2007).

²⁶¹ *Id*.

Michigan's increasingly high-tech economy.²⁶² It is one of the largest programs in the state for technology innovation and the creation of intellectual property.²⁶³

The Fund invests in research at state universities, non-profit research institutions, and the commercialization of products, processes, and services. The focus is on technologies in life sciences, alternative energy, advanced automotive manufacturing and materials, and homeland security and defense. In addition to funding research, the Fund is also permitted to invest in equity funds, qualified mezzanine funds, and qualified venture capital funds that will seek to create or retain jobs in Michigan. Lastly, the Fund can create commercial loan enhancement programs where a growth opportunity has been identified and for assisting small business owners.

The Fund does not contain a specific policy on intellectual property that is created through the financial support of the Fund. Most of the money disbursed goes to public universities and colleges in Michigan and are thereby governed by the university intellectual property policy in place. No specific intellectual property policy was found regarding intellectual property created through the use the Fund that is not created at a public university. Also, no intellectual property policies or rules regarding the recipients of the commercial loans were found. Lastly, no legislative bills seeking to reform policies or laws regarding intellectual policy

C.23 Minnesota

C.23.1 State University IP Policies

²⁶² 21st Century Jobs Fund Overview, available at: http://www.michigan.org/cm/attach/26DBE4B7-9637-4408-AE6C-E5C333AB5B32/21stCenturyOverview.pdf (last visited March 11, 2007).

²⁶³ *Id*.

²⁶⁴ *Id*.

²⁶⁵ *Id*.

²⁶⁶ *Id*.

²⁶⁷ State Leaders Highlight 21st Century Jobs Fund, available at: http://www.michigan.gov/som/0,1607,7-192-26847-130900--,00.html (last visited March 11, 2007)

The Constitution of the State of Minnesota includes a University Charter. This University Charter provides that the government of the University is vested in a Board of twelve Regents and the Board has the power and duty to enact laws for the University. As such, the Board of Regents has developed an intellectual property policy that applies to all public colleges and universities in the state of Minnesota. The Minnesota of Minnesota of Minnesota of Minnesota.

The intellectual property policy developed by the Board of Regents of Minnesota applies to all public universities in the state.²⁷¹ The policy includes sections on: purpose, application, definitions, administrative procedures, university ownership and exceptions, use of intellectual property, income distribution, university responsibilities, individual responsibilities, and compliance.²⁷²

In terms of ownership, the University is the sole owner of intellectual property that is created at the facilities or by the use of funds allocated by the university by an employee in the scope of employment.²⁷³ Works created by a student fulfilling a course requirement are owned by the student, not the University.²⁷⁴ If a student is acting in an employee capacity for the University and creates intellectual property, ownership will vest in the University.²⁷⁵

The policy also contains a provision for the distribution of income derived from intellectual property.²⁷⁶ About 33% goes to the creator, about 33% goes to the Vice President of Research to support further research in the technology transfer office, 8% goes to the creators department or school that supported the intellectual property, and about 25% goes to the department, division, or center that supported the research. The portion that goes to the

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<sup>268</sup> Minn. Con. Article 8 Sec 4
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²⁶⁹ *Id*.

²⁷⁰ *Id*.

²⁷¹ Intellectual Property Policy, available at: http://www1.umn.edu/regents/policies/academic/IntellectualProperty.pdf (last visited March 12, 2007)

²⁷² *Id*.

²⁷³ *Id*.

²⁷⁴ *Id*.

²⁷⁵ *Id*.

²⁷⁶ *Id*.

department, division, or center, is to be spent directly on the inventor's further research or directly related work. ²⁷⁷ Changes to this policy can be made by approval of the Vice President of Research in consultation with the Senate Committee on Research and the appropriate deans. ²⁷⁸

The University takes on the responsibility to oversee intellectual property and technology transfer management, establishing effective licensing procedures, promoting effective marketing and distribution of the intellectual property, and informing applicable individuals of the Policy. It is the responsibility of the individual to adhere to this policy, adhere to state, local, and federal laws applicable to intellectual property, and to promptly disclose intellectual property to the University. Failure to comply with the policy may result in disciplinary action of the employee by the University. ²⁸¹

The Minnesota Board of Regents subjects the University and its employees to the Conflicts of Interest policies of the University and the State of Minnesota Conflict of Interest Statute. ²⁸²

C.23.2 Special Funding Agency IP Policies

In 2006, Minnesota created an environmental protection fund.²⁸³ This fund was created to ensure proper management of the state's natural resources for the benefit of current citizens and future generations. ²⁸⁴ The fund disburses much of its money to government agencies that operate with the purpose to protect the environment. ²⁸⁵ These agencies contract with private businesses or non-profit agencies during the course of normal business. Therefore, some of these state funds are or have the potential to support the creation of intellectual property. Minnesota

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<sup>277</sup> Id.

<sup>278</sup> Id.

<sup>279</sup> Id.

<sup>280</sup> Id.

<sup>281</sup> Id.

<sup>281</sup> Id.

<sup>282</sup> Id.

<sup>283</sup> Minn. Stat. § 116P.01, (2006)

<sup>284</sup> Id.

<sup>285</sup> Id.
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specifically addressed ownership of such intellectual property in its environmental protection fund. Ownership of any intellectual property created from any project supported by the Fund is owned by the Fund. Any cash receipts that are derived from a royalty, copyright, or patent must be credited to the Fund. Plane 1.288

C.24 Mississippi

C.24.1 University IP Policies

All public universities within Mississippi are under the management and control of the Board of Trustees of State Institutions of Higher Learning.²⁸⁹ The duties of the board include the use, distribution and disbursement of all fund, maintenance or capital outlay expenditures of the institutions of higher learning, and several other duties.²⁹⁰ The public universities are thereby left to create their own intellectual property policies.

Mississippi State University (MSU), for example, has developed its own intellectual property policy.²⁹¹ The policy of MSU covers all forms of intellectual property.²⁹² There is not a separate policy for patentable works as some universities have created.²⁹³

The policy itself is divided into ten sections: definitions, intellectual property advisory committee, intellectual property policy applicability, assignment of rights, determination of rights in intellectual property, administrative procedures, appeals and conflicts, changes in policy, and development funds.²⁹⁴

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<sup>286</sup> Id.
<sup>287</sup> Id.
<sup>288</sup> Id.
<sup>289</sup> Miss. Code Ann. § 37-101-1
<sup>290</sup> Id.
<sup>291</sup> "Policy and Procedure Statement on Intellectual Property at Mississippi State University," Available at: http://www.msstate.edu/dept/audit/7601.html#V. %20ASSIGNMENT%200F%20RIGHTS (last visited March 13, 2007).
<sup>292</sup> Id.
<sup>293</sup> Id.
<sup>294</sup> Id.
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When intellectual property is created through the use of MSU facilities or equipment, all employees are required to execute an assignment of rights for intellectual property to MSU. ²⁹⁵ In addition, students are required to assign the intellectual property rights to MSU in several different situations. ²⁹⁶ They include situations when the student is an employee of MSU, holds a scholarship or fellowship through MSU under which the funding body imposes restrictions on intellectual property, a co-inventor with a party who is required to assign their intellectual property rights, or if they utilize proprietary know-how provided by a party required to assign their intellectual property rights to MSU, or if they are commissioned by MSU to assign their rights to the University. ²⁹⁷

Students and employees are required to assign the rights to MSU when the intellectual property is created in the general scope of employment or field of work and it is conceived through the use of MSU funding, facilities, resources, or time. Assignment of rights is also required when the intellectual property involves the use of MSU information that is not generally known to the public. Intellectual property created outside the scope of employment or that is made without the use of MSU funding, facilities, or time, does not require an assignment of rights to MSU. The intellectual property policy of MSU also includes an income distribution provision. The MSU policy does not contain a provision allowing the inventor to participate as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property. The intellectual property.

Additionally, in 1992, the State of Mississippi enacted the Mississippi University Research Authority (MURA) law to promote the commercialization of intellectual property by

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<sup>295</sup> Id.

<sup>296</sup> Id.

<sup>297</sup> Id.

<sup>298</sup> Id.

<sup>299</sup> Id.

<sup>300</sup> Id.
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³⁰¹ University of Michigan Technology Transfer Policy, available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007).

lessening the rigidity of the conflict of interest issues that often occur. MURA was enacted to promote public welfare and prosperity in Mississippi by creating bonds between the public universities, business and industrial communities, and state government. The legislation provides for an officer or employee of a state university to apply to MURA, which has the power to grant permission to establish and maintain a financial interest in a private entity that is receiving direct or indirect support from the University. The goal is to facilitate the transfer of the technology from the University to commercial and industrial ventures for economic gain in the state of Mississippi. In sum, the State of Mississippi has enacted a law to provide the legal framework for the commercialization of intellectual property for public college or university employees.

The authority shall have the power to implement and further the purposes of the Mississippi University Research Authority Act including the power:

- (a) To lease, sell, exchange or transfer to a university or university research corporation personal property, money or other assets on terms and conditions—established by the authority which are fair, just, and reasonable to the authority and the university involved and to enter into any other contract or agreement with the university research corporation or other private entity.
- (b) To conduct, sponsor, finance and contract in connection with technological innovations of all kinds.
- (c) To receive gifts, grants and donations of money, personal property or other assets of any kind from any source.
- (d) To do anything else which the authority deems appropriate to further the purposes of the Mississippi University Research Authority Act.

³⁰⁴ *Id*.

³⁰² Objectivity in Research, available at: http://www.olemiss.edu/depts/research/office/policies/research_objectivity.html (last visited March 12, 2007)/

 $^{^{303}}$ *Id*.

³⁰⁵ *Id*.

C.24.2 Special Funding Agency IP Policies

The state of Mississippi recently developed the Mississippi Technology Alliance (MTA).³⁰⁶ MTA is a non-profit organization with the purpose of creating economic development within the state by providing funding to small businesses with a high potential for growth in connection with public university or college in Mississippi.³⁰⁷

In February 2007, a bill that providing more precise rules as to the program's funding and general polices was introduced into the legislature. The bill has several purposes. It is an act to establish the research and development program for making money available for small and medium sized Mississippi businesses with high growth potential that are engaged in research activities is a public college or university in Mississippi. It also provides funding to support capitalization of technology based businesses in rural parts of the state. It also provides that the programs established under the bill are under the direction of the MTA which established requirements and guidelines for the programs. The requirements and guidelines of the bill define who and what types of businesses are eligible for funding, the types of research that funding can be used for, as well as structures for paying back the funds received. In addition, ownership of rights in the intellectual property in various different situations is addressed.

C.25 Missouri

C.25.1 University IP Policies

The public university system in Missouri is the University of Missouri, which encompasses four campuses in various cities in Missouri. The Constitution of Missouri grants

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306 2007 Bill Text MS H.B. 1724

307 Id.

308 Id.

309 Id.

310 Id.

311 Id.

312 Id.

313 University of Missouri, available at: http://www.umsystem.edu/ (last visited March 19, 2007).
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the power to govern the public university system to a board of directors.³¹⁴ The rules and regulations of the public university system have been codified.³¹⁵ The rules pertaining to patents are codified in the Collected Rules and Regulations of the University of Missouri, section 100.020.³¹⁶

Regulations on patents apply to all University employees and students, paid or unpaid, who make an invention within the general scope of duties as an employee of the University or as a student utilizing the University. Such students and employees are required to assign rights of ownership to the University of intellectual property created within their general scope of duties for the University. They are also required to disclose any and all applicable intellectual property to the University. They are also required to disclose any and all applicable intellectual property to the University.

The policy also outlines a royalty and costs provision. The University pays all costs when it prosecutes a disclosed invention. The inventor receives about 33% of the gross royalty as personal income. After the expenses are offset, the campus where the intellectual property was created receives 1/3 of the net revenue, the inventor's academic department will receive 1/3 of the net revenue, and the University receives one third of the net revenue. All royalty income to the University is reinvested into the research and patent program. The policy does not include a provision allowing creators of intellectual property policy to participate

³¹⁴ Mo. Const. Art. IX, § 9(a)

³¹⁵ Collected Rules and Regulations of the University of Missouri, available at: http://www.umsystem.edu/ums/departments/gc/rules/business/100/020.shtml (last visited March 16, 2007)

³¹⁶ *Id*.

³¹⁷ *Id*.

³¹⁸ *Id*.

³¹⁹ *Id*.

³²⁰ Id.

³²¹ *Id*.

³²² *Id*.

³²³ *Id*.

³²⁴ *Id*.

as an equity shareholder or owner if the University were to create a company, corporation, or business from the inventor's intellectual property. 325

C.25.2 Special Funding Agency IP Policies

Missouri, like many other states, has an economic development program with the purpose of promoting business and innovation within the state.³²⁶ Missouri's program, the Missouri Economic Development Council (MEDC), is a statewide, not-for-profit association of economic developers.³²⁷ It was created in 1979 to promote and help fund programs for professional education, legislation, and marketing.³²⁸ MEDC works closely with the Missouri Department of Economic Development to promote business in Missouri.³²⁹ There is not a uniform policy for state funds received by MEDC regarding the ownership rights therein or royalty payment structures for the intellectual property that they create.

Also, an act was recently introduced in Missouri that created the Entrepreneurial Development Council within the Missouri Department of Economic Development. The primary purpose of this newly created department within the state agency is to focus on intellectual property matters. The Council will review intellectual property within the state, prosecute those who are infringing on the state's intellectual property, and review ownership rights of intellectual property created in the state, including that which is created within the University system. This bill was introduced in late February, 2007, and just introduced to a Senate committee in early March.

³²⁵ University of Michigan Technology Transfer Policy," Available at: http://www.techtransfer.umich.edu/inventors/policies2007.html (last visited March 11, 2007).

^{326 &}quot;MEDC," Available at: http://www.showme.org/ (last visited March 16, 2007).

³²⁷ *Id*.

³²⁸ *Id*.

³²⁹ *Id*.

³³⁰ 2007 MO S.B. 631

³³¹ *Id*.

³³² *Id*.

³³³ Id.

C.26 Montana

C.26.1 University IP Policies

The Montana Board of Regents of Higher Education (MBRHE) has adopted a patent policy applicable to all employees and units of Montana's University System.³³⁴ The MBRHE was created by Article X, Section (9) of the Montana constitution and vested with the "full power, responsibility, and authority to supervise, coordinate, manage and control the Montana University System...."³³⁵

All patentable inventions made by University employees "in connection with their assigned duties and/or by the use of the System's facilities" is the property of the unit (e.g. college, school, division, etc.) employing the inventor if "the person responsible for the invention was employed by the unit specifically for that purpose," the inventor's "contract of employment contains specific provision vesting ownership in the unit," or "to the extent recommended by the Unit Patent Management Committee and approved by the President if research or endeavors directly resulting in the discovery or development of the invention or marketable product involved use of unit time, materials, property, or facilities." Under other circumstances, University employees are free to seek patents and exclusive rights in their inventions "under the patent laws of the United States." University support that is not "significant" in degree or merely provides a "normal academic environment, including library facilities" does not justify equity or University ownership in the inventor's invention.

If an invention was made or developed pursuant to a sponsor agreement, the rights to that invention "shall be governed by provisions of that agreement." If the sponsor determines that invention rights should vest with the unit employing the inventor, the unit may pursue one of three options: "(1) Elect to acquire title to the invention by assignment..." from the inventor, "(2)

Montana Board of Regents of Higher Education Policy and Procedures Manual: Policy 401.2, Inventions and Patents, at http://bor.montana.edu/borpol/bor400/4012.htm (last visited March 12, 2007).

³³⁵ Montana Const. Art. X, Section (9)(2)(a).

³³⁶ Montana Board of Regents of Higher Education Policy and Procedures Manual: Policy 401.2, Inventions and Patents, Sections (1)(a) - (c), at http://bor.montana.edu/borpol/bor400/4012.htm (last visited M arch 12, 2007).

³³⁷ *Id.*, at Section (1) of "Procedures."

³³⁸ *Id.*, at Sections (2)(b) and (4)(a).

³³⁹ *Id.*. at Section (5)(c).

Cause the invention to be assigned to some patent management organization, such as Research Corporation or the Unit's Research Foundation", or "(3) Decline to accept any rights to the invention by assignment or otherwise, in which case all rights revert to the inventor." Under option (2), the inventor is entitled to "50 percent of all net royalties and other income received by the University" from the patent management organization. 341

Regardless of the option exercised by the unit, the "inventor has an obligation to offer the unit the opportunity to develop the invention for commercial use if the invention was made under unit auspices." If, after three years from the time the unit acquires a patent in the invention, the invention has not been marketed, "all rights revert to the inventor, unless an agreement with any outside sponsor precludes such reversion." 343

C.26.2 Specialized Funding Agency IP Policies

State funding of R&D in Montana is governed by the Montana Board of Research and Commercialization Technology (MBRCT). The MBRCT was created by the Montana legislature in 1999 to allocate statutorily appropriated funds to "research and commercialization centers", which are statutorily defined as "the campuses of the University of Montana or Montana State University, tribal colleges, colleges of technology, community colleges, agricultural research centers, or a private laboratory or research center." 345

The MBRCT provides that IP rights belong to the funding recipient unless the MBRCT provides otherwise in an agreement with the funding recipient. Specifically, the MBRCT provides that "[a]ll intellectual property rights, including any patents, copyrights, trademarks, and trade secrets developed by the funding recipient with use of funds provided by the Board, will be owned by the recipient or the recipient will have appropriate rights thereto as determined in consultation and agreement with the board."³⁴⁶

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³⁴⁰ *Id.*, at Sections (5)(b) and (5)(c).

³⁴¹ *Id.*, at Section (5)(b)(2).

³⁴² *Id.*, at Section (5)(b).

³⁴³ *Id.*, at Section (7).

Montana Code Ann. 2-15-1819, See also http://businessresources.mt.gov/BRD_RCT.asp

³⁴⁵ Montana Code Ann. 90-3-1001(c)(2).

³⁴⁶ Montana Admin. Rule 8.100.111.

C.26.3 Other

Montana has also passed legislation and promulgated regulations concerning IP rights in specific contexts. For instance, a University employee, with approval from the Board of Regents, may "own or be awarded equity interest or participation" in the IP he develops or serve as a director, officer, or employee of a business entity that has "an agreement with the university system or with any other Montana state agency or political subdivision" concerning the IP. ³⁴⁷ In addition, a recipient of a loan from the Montana Agriculture Development Council has the right to all IP, "including any patents, copyrights, trademarks, and trade secrets" resulting from the use of the loan, ³⁴⁸ provided the recipient draft an agreement requiring the recipient's "employees, agents, independent contractors, and others who may reasonably be expected to create intellectual property rights to assign any and all intellectual property" during the term of the loan to the loan recipient. ³⁴⁹

C.27 Nebraska

C.27.1 University IP Policies

The Board of Regents of the University of Nebraska is responsible for the authorization of research programs and other activities of the universities.³⁵⁰ For convenience, the University of Nebraska Board of Regents will be referred to as the "University of Nebraska."

The University of Nebraska ("NU") has promulgated an IP policy that is applicable to all of its campuses and "any organization of the University whose primary purpose is to facilitate technology transfer and commercialization of the University's intellectual property." NU has

³⁴⁷ Montana Code Ann. 20-25-109.

³⁴⁸ Montana Admin. Rule 4.16.502(1).

³⁴⁹ Montana Admin. Rule 4.16.502(2).

³⁵⁰ Neb.Rev.St. § 85-102.02

University of Nebraska Board of Regents Policy on Ownership of Intellectual Property (RP 4.4.1), at http://www.unl.edu/research/td/IP%20Policy.doc (last visited Apr. 20, 2007).

also promulgated a "patent and technology transfer" policy³⁵² and provided standard invention disclosure forms.³⁵³

Section 3.4 of NU's IP policy categorizes all research work products into four categories: "Independent Works", "University Supported Works", "Institutional Works", and "Contractual Works." A particular work product must fall into only one of these categories. For our purposes, NU's polices on "contractual works (sponsored research)" are pertinent. These polices are provided in Section 7.0 of NU's policy.

Section 7.0 provides that IP rights in creative works "developed in the course of or pursuant to a sponsored research program or other contractual arrangement" are determined in accordance with the terms of that program or contract. Essentially, contracts with non-federal research sponsors are "negotiated on a case-by-case basis with ownership and other rights to the discovery of any patentable invention determined in the course of negotiations." Research contracts sponsored by the federal government are "subject to statutes and regulations under which the University acquires title to inventions conceived or first reduced to practice in the performance of the research."

If the research program or contract does not determine IP rights, "such rights will be determined by the other provisions of this policy." These "other provisions" are not specified. However, NU's IP and patent policies are "structured within the context of those

³⁵⁷ *Id*.

³⁵⁸ *Id*.

³⁵⁹ *Id*.

³⁶⁰ *Id*.

³⁵² University of Nebraska Board of Regents Policy on Patent and Technology Transfer (RP 4.4.2), at http://www.nebraska.edu/board/RegentPolicies.pdf (last visited March 14, 2007).

³⁵³ University of Nebraska Forms and Agreements, at http://www.unl.edu/research/td/forms.shtml (last visited March 14, 2007).

University of Nebraska Board of Regents Policy on Ownership of Intellectual Property (RP 4.4.1), Section 3.4 Comment, at http://www.unl.edu/research/td/IP%20Policy.doc (last visited Apr. 20, 2007).

³⁵⁵ University of Nebraska Board of Regents Policy on Ownership of Intellectual Property (RP 4.4.1), Section 7.0, at http://www.unl.edu/research/td/IP%20Policy.doc (last visited Apr. 20, 2007).

³⁵⁶ *Id*.

federal laws" defining patent concepts and rights.³⁶¹ While these statements are not rigid rules, they do provide the sources NU might look to to resolve IP disputes.

To ensure compliance with the Bayh-Dole Act, NU requires that every invention or improvements thereon be "promptly disclosed in writing to the designated campus patent and technology transfer administrator." This allows NU to make a timely decision as to whether to retain or decline title to the invention pursuant to Bayh-Dole. NU may for any reason determine "in the best interests of the University" that title to the invention should be assigned to the inventor, but NU may at the same time "retain a non-exclusive, paid-up, royalty-free license to the invention."

NU requires inventors fill out invention disclosure forms.³⁶⁵ The purpose of these forms is to provide a "written, dated record of your invention disclosure and to provide information from which your technology can be evaluated as to its patent and commercial potential."³⁶⁶ The forms also "enable the University to comply with industrial contract requirements as well as the requirements of the U.S. Federal Government laws and regulations as they are applied to university grants and contracts."³⁶⁷

Among the items an inventor must provide in the disclosure form are the names of the inventors involved and their relative percentage of intellectual contribution to the invention, the date of conception, descriptions of the invention, descriptions of any full or partial prior disclosures of the invention, and identification of all sponsors of the project.³⁶⁸ Also requested is

³⁶¹ *Id*.

³⁶² University of Nebraska Board of Regents Policy on Patent and Technology Transfer (RP 4.4.2), RP-4.4.2(1), at http://www.nebraska.edu/board/RegentPolicies.pdf (last visited March 14, 2007).

University of Nebraska Board of Regents Policy on Patent and Technology Transfer (RP 4.4.2), RP-4.4.2(1)(fn. 3), at http://www.nebraska.edu/board/RegentPolicies.pdf (last visited March 14, 2007)

University of Nebraska Board of Regents Policy on Patent and Technology Transfer (RP 4.4.2), RP-4.4.2(4), at http://www.nebraska.edu/board/RegentPolicies.pdf (last visited March 14, 2007)

³⁶⁵ University of Nebraska Forms and Agreements, at http://www.unl.edu/research/td/forms.shtml (last visited March 14, 2007).

³⁶⁶ *Id*.

³⁶⁷ *Id*.

³⁶⁸ *Id*.

the inventor's feedback on the state of development of the conception or invention, its commercial potential, and the time and money needed to put a work in commercial form. ³⁶⁹

C.27.2 Specialized Funding Agency IP Policies

Under Nebraska Revised Statute 81-1280, the director of the Department of Economic Development may "acquire title on behalf of the State of Nebraska to any patent resulting from research projects conducted with funds of the Nebraska Agricultural Products Research Fund [NAPRF]."³⁷⁰ The director may also, with approval from the governor, "grant licenses or otherwise dispose of a patent as he or she deems to be most favorable to the State of Nebraska."³⁷¹ Any income derived from this activity must be paid into the NAPRF fund. ³⁷²

C.28 Nevada

C.28.1 University IP Policies

The University of Nevada, Las Vegas ("UNLV"), in conjunction with the Board of Regents of the Nevada System of Higher Education ("NSHE"), have adopted an IP policy in the context of sponsored R&D.³⁷³ The NSHE encompasses the universities, state colleges, research facilities and other entities administered under the direction of the Board of Regents.³⁷⁴ The Board of Regents has the authority to prescribe rules for the government of the NSHE.³⁷⁵

Under Section 4, subsection 2(d) of that policy (entitled "Sponsor-Supported Efforts"), all research and consulting agreements must contain "Intellectual Property terms that are consistent with this Policy." These agreements may provide the sponsor with "an option to license any

³⁶⁹ *Id*.

³⁷⁰ Neb.Rev.St. § 81-1280

³⁷¹ *Id*.

³⁷² *Id*.

University of Nevada, Las Vegas Intellectual Property Policy, at http://www.unlv.edu/Research/about/about_policies_unlvip.html#sig (last visited March 14, 2007).

³⁷⁴ Nevada Rev. Stat. 396.020.

³⁷⁵ Nevada Rev. Stat. 396.110.

University of Nevada, Las Vegas Intellectual Property Policy, Section 4, subsection 2(d), at http://www.unlv.edu/Research/about/about_policies_unlvip.html#sig (last visited March 14, 2007).

resulting Intellectual Property" or may "under limited circumstances obtain an option for an assignment of Intellectual Property, on terms to be negotiated by the Technology Transfer Office at UNLV."³⁷⁷ Where the sponsor agreement vests ownership rights in the NSHE, "the Inventor or author shall share in any Net Income received by UNLV under the terms of this policy."³⁷⁸ Net income is defined as "the income received by UNLV from a NSHE owned Invention, Copyrighted Work, or other form of Intellectual Property" minus a 15% management fee, applicable facility and administrative costs, and "all third party payments or obligations directly attributable to patenting, copyrighting, trade marking, marketing, and transferring Intellectual Property."³⁷⁹

C.28.2 Specialized Funding Agency IP Policies

No information found.

C.29 New Hampshire

C.29.1 University IP Policies

The University of New Hampshire ("UNH") has adopted a IP Policy in the context of R&D.³⁸⁰ UNH was created by statute to "teach such branches of learning and to prosecute such researches as may be necessary and desirable in the education of youth and development of the arts...."

Under that policy, any faculty member, staff member, student, visiting scholar, or "any other person at the University involved in carrying out the University's mission at or under the auspices of the University" owns all IP that he or she creates unless there is a "legal obligation that otherwise restricts ownership by virtue of a Sponsored Research, Material Transfer, Confidential Disclosure or other legally binding agreement", in which case IP ownership is

379 *Id. at* Section 2, subsection (5).

³⁷⁷ *Id. at* Section 4, subsection 2(d).

³⁷⁸ *Id.*.

³⁸⁰ University of New Hampshire Intellectual Property Policy No. VI-B-2.1, at http://www.unh.edu/osr/policies/support/intellectual_policy.pdf (last visited March 14, 2007).

³⁸¹ N.H. Rev. Stat. §187-A:3.

³⁸² Section IV(3).

governed by the "contract or other agreement between the University and the other legal entity." In addition, federally sponsored projects must follow 37 CFR 401. Inventions made by graduate students during the course of "work performed under a grant or other sponsorship...shall be the property of the University and shall be subject to the Intellectual Property Policy." Policy."

Note that a "Material Transfer Agreement" is defined as a "legal document that governs the transfer of Tangible Research Property between the University and a potential partner for testing and evaluation purposes." Tangible Research Property" is defined as "perceptible items produced in the course of research including such items as biological materials, engineering drawings, integrated circuit chips, computer databases, prototype devices, circuit diagrams, and equipment." Tangible Research Property is defined as "perceptible items produced in the course of research including such items as biological materials, engineering drawings, integrated circuit chips, computer databases, prototype devices, circuit diagrams, and equipment."

A UNH faculty/staff inventor or UNH may take an equity interest in a start up company. A UNH faculty/staff inventor may also serve as an "officer, board member, or employee of the start-up company", but only under the "stringent adherence to the USNH/UNH conflict of interest policies. "389 NHU's conflict of interest policy provides that a conflict of interest exists when "it can be reasonably determined that an investigator's personal financial concerns could directly and significantly influence the design, conduct or reporting of sponsored

³⁸³ University of New Hampshire Intellectual Property Policy No. VI-B-2.1, Section V(3), at http://www.unh.edu/osr/policies/support/intellectual_policy.pdf (last visited March 14, 2007).

³⁸⁴ *Id. at* Section V(3). Title 37, Part 401 of the Code of Federal Regulations is entitled "Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts, and Cooperative Agreements."

³⁸⁵ University of New Hampshire Intellectual Property Policy No. VI-B-2.1, Section VI(2), at http://www.unh.edu/osr/policies/support/intellectual_policy.pdf (last visited March 14, 2007).

³⁸⁶ *Id. at* Section IV(12)

³⁸⁷ *Id. at* Section IV(21)

³⁸⁸ UNH Policy on Management of Equity Interests in Start-Up Companies, at http://www.unh.edu/users/unh/acad/ceps/orpc/equity.html (last visited April 4, 2007).

³⁸⁹ *Id*.

research activities."³⁹⁰ Under this policy, NHU faculty and staff have an "obligation to scrupulously maintain the objectivity of their research so as to avoid any conflict of interest."³⁹¹

C.29.2 Specialized Funding Agency IP Policies

No information found.

C.30 New Jersey

C.30.1 University IP Policies

Rutgers, State University of New Jersey ("Rutgers") has adopted a patent policy in the context of R&D. 392 Rutgers was created by statute. 393

Under the patent policy, ownership of patents arising from work sponsored by federal agencies is subject to the "Bayh-Dole Act as amended, other applicable law, and the provisions of this patent policy." Ownership of patents arising from work "funded by other external sponsors" is subject to "specific provisions contained in research proposals and agreements with those sponsors which have been executed by an appropriately authorized individual in accordance with University regulations."

Rutgers has the right, "at its sole discretion and under conditions it deems appropriate", to form agreements involving equity. The terms of such agreements and the distribution of income deriving from them must be "negotiated by the Director of the Office of Corporate Liaison and Technology Transfer for review and approval by the Vice President for Research and the Senior Vice President and Treasurer, or their designees." 397

³⁹⁰ *Id*.

³⁹¹ *Id*.

³⁹² Patent Policy of Rutgers, State University of New Jersey, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf (last visited April 4, 2007).

³⁹³ N.J.S.A. 18A:65-3.

³⁹⁴ Patent Policy of Rutgers, State University of New Jersey, Section D, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf (last visited April 4, 2007).

³⁹⁵ *Id*.

³⁹⁶ Patent Policy of Rutgers, State University of New Jersey, at http://ocltt.rutgers.edu/documents/patentpolicy.pdf (Section G)(last visited April 4, 2007).

³⁹⁷ *Id*.

C.30.2 Specialized Funding Agency IP Policies

No information found.

C.31 New Mexico

C.31.1 University IP Policies

New Mexico State University, which is governed by NM ST § 21-7-5, has an IP policy. ³⁹⁸ Under the policy, all IP will belong to the originator, except that: 1) IP will belong to the University if it was developed by a University employee and related to their regularly assigned duties. However, earnings from patents, copyrights and/or trademarks will be shared with the Originator, or the University will return or assign rights to the Originator; 2) The University will own IP developed with the significant use of University resources, but earnings will still be shared with Originator; 3) Where IP results from projects funded by a contract or grant to the University, ownership will be determined in accordance with the terms of the contract or grant; 4) Where IP results from consulting activity by a University employee, to which the University is a party, ownership will be determined according to the terms of the agreement; and 5) IP belonging solely to the Originator can be submitted to the IPO to obtain the University's assistance in protection and commercialization of the IP, but an agreement must be signed and written by the Originator and University before the University will provide such assistance. Generally, the University will require some consideration such as an assignment, license, right to receive royalties, etc. Where Bayh-Dohl applies, the University will take whatever steps necessary to comply with that act.

New Mexico statutes also enumerate some of the powers of "research park corporations," which carryout and effectuate the provisions of the University Research Park Act.³⁹⁹ Among other things, they can purchase, take, own, and deal in property, including IP or technological innovations. They can also enter into license agreements and contracts, including those involving IP and technological innovations such as patents, copyrights, franchises, and trademarks.

C.31.2 Specialized Funding Agency IP Policies

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³⁹⁸ Intellectual Property Policy & Procedures, New Mexico State University: Office of the Vice President for Research, available at http://research.nmsu.edu/docs/IP/intelPropPP.html.

³⁹⁹ N.M STAT. ANN. § 21-28-6 (West 1998).

In 2001, New Mexico enacted a "Patent and Copyright Act." Under the act, "Inventions, innovations, works of authorship and their associated materials that are developed by a state employee, except an employee of a state educational institution, within the scope of his employment or when using state-owned or state-controlled facilities or equipment are the property of the state." This provision does not apply to state employees employed by a state educational institution designated in Article 12, § 11 of the NM constitution. 402

Under the Patent and Copyright Act, the Economic Development department is required to (1) be responsible for the administration of the Act; (2) promulgate rules pursuant to the Act; (3) apply, on behalf of the state, for the patent protection or registration of copyright and pay the associated expenses; (4) share with the inventor, after expenses, fifty percent of the income collected on the invention or work; and (5) determine, after a cost-benefit analysis, whether to retain the patent or copyright for the state. The Act also created the "patent and copyright fund" in the state treasury. Income the state receives pursuant to the Act is to be deposited into this fund, and money in the fund can be appropriated to the economic development department to carry out provisions of the Act. Leftover funds at year end do not revert to the general fund.

New Mexico has also statutorily created the "Technology Research Collaborative," (TRC) for which the New Mexico Institute of Mining and Technology is the fiscal agent. Also National laboratories and other major research institutes and all post-secondary institutions of NM are participating institutions associated with the collaborative. The TRC's purposes are to: (1) establish advanced technology centers based on the wealth of scientific and technical talent that exists in the member institutions; (2) develop and create new IP for the state and encourage new opportunities for business and increased jobs; (3) commercialize the IP; and (4) create a

⁴⁰⁰ N.M STAT. ANN. § 57-3C (West 2001).

⁴⁰¹ N.M STAT. ANN. § 57-3C-3 (West 2001).

⁴⁰² *Id*.

⁴⁰³ N.M STAT. ANN. § 57-3C-4 (West 2001).

⁴⁰⁴ N.M STAT. ANN. § 57-3C-5 (West 2001).

⁴⁰⁵ N.M STAT. ANN. § 21-11-8.5 (West 2006). *See also* New Mexico Technology Research Collaborative, http://www.nm-trc.org/ (last visited Mar. 15, 2007).

work force to support enterprises based on the IP. IP created by an employee/agent of an associated institution shall be owned by that institution. IP created jointly will be owned jointly. If created using federal funds, applicable federal laws (Bayh-Dohl) will govern ownership.

TRC institutions enter into an Inter-Institutional Agreement (IIA). The purpose of this agreement is to "make[] the licensing and commercialization of intellectual property . . . bundles easier and more effective." This IIA "identifies a single licensing institution per IP bundle." It provides the right to sublicense non-exclusively a bundle of IP (patents only) and leaves the owning institution the right to still license their piece of the bundle non-exclusively. Licenses may be for a subset of an IP bundle, or for the entire bundle. When an IP bundle is licensed, license fees and royalties are required, and licensing income is "distributed fairly."

The New Mexico legislature created the "Board of Technology Research Collaborative," which consists of the governor or his designee; presidents of certain universities and institutes in the state, or their designees; some members at large, to be appointed by the governor; Director of Sandia National Labs; Director of Los Alamos National Lab.⁴¹⁰ The board is to prepare annual reports to the legislature on expenditures and progress of the collaborative.

Finally, New Mexico allows corporations under the Economic Development Corporation Act to take, receive, or otherwise acquire; own, hold, dispose of or use; and otherwise deal in property, including IP or technological innovations.⁴¹¹

C.32 New York

Information on New York State Intellectual Property Policies is detailed in section 4.0 of the main report.

⁴⁰⁶ *About TRC: What We Do*, New Mexico Technology Research Collaborative, http://www.nm-trc.org/whatdo.html (last visited Mar. 15, 2007).

⁴⁰⁷ *Id*.

⁴⁰⁸ *Id*.

⁴⁰⁹ *Id*.

⁴¹⁰ N.M STAT. ANN. § 21-11-8.5 (West 2006).

⁴¹¹ N.M STAT. ANN. § 53-7A-4 (West 2003).

C.33 North Carolina

C.33.1 University IP Policies

The University of North Carolina, which is established and governed by NC ST § 116-3 and NC ST § 116-11, has an IP policy for patents and copyrights. The purpose of the policy is "to stimulate and recognize creativity among the faculty, staff, and students, and to establish an institutional process that is flexible enough to accommodate the different types of research and innovative work conducted at a comprehensive research university such as NCSU." The statement of purpose goes on to say that "[e]quity and fairness are goals of the Procedures in all respects, not only in the distribution of revenue, but also in the recognition of inventors." According to the policy, inventions made by University personnel or students entirely on their personal time and not involving the use of University facilities or materials, are the property of the inventor unless an agreement with the University and federal or state government says otherwise. Otherwise, the University will own the IP.

Pursuant to the policy, all University faculty, staff, and students must disclose all inventions to the University. When an inventor has an invention to disclose, they prepare the disclosure with the assistance of an "invention manager" from the Office of Technology Transfer. Once an invention is disclosed, the University will decide whether they think the invention would be most effectively made available for broad public use and dissemination by commercialization, or under a cooperative agreement with a commercial or non-commercial partner. The University can also dedicate the invention to the public domain, or waive any further University involvement with the invention. If the University decides not to have any

⁴¹² UNC Intellectual Property Policies, THE UNIVERSITY OF NORTH CAROLINA, http://www.northcarolina.edu/content.php/aa/research/copyright/copyright.htm.

⁴¹³ *Policies, Regulations & Rules: Patent Procedures,* NC STATE UNIVERSITY, http://www.ncsu.edu/policies/research/POL10.00.1.php.

⁴¹⁴ *Id*.

⁴¹⁵ *Id*.

⁴¹⁶ *Id*.

⁴¹⁷ *Id*.

further involvement with the invention, then the Tech Transfer Committee, in its sole discretion, can release all rights to the inventor. 418

If the University does decide to commercialize an invention, it will share any licensing fees or royalties generated with the inventor. For any gross revenue that is "generated as a result of sales by licensees or any 'trigger event' in a license or option agreement (such as up front fees, milestone payments, minimum royalty payments, and the like) where the sales or the trigger event occurred on or after July 1, 2002, the inventors' share of Gross Revenue is 40%, unless otherwise agreed in writing between the University and the inventor(s)." In any event, the University will pay the inventor a minimum of 15% of the gross revenues generated by the invention. 421

C.33.2 Specialized Funding Agency IP Policies

No information found.

C.33.3 Other

North Carolina has a statutorily created State Employee Incentive Bonus Program. 422 The program allows bonuses to be gives to state employees and teams of employees as a reward for suggestions or innovations resulting in monetary savings to the State, increased revenues to the State, or improved quality of services delivered to the public. All suggestions and innovations submitted are the property of the state of North Carolina, and all related IP rights will be assigned to the State.

C.34 North Dakota

C.34.1 University IP Policies

Among other things, North Dakota statutes⁴²³ give the North Dakota State Board of Higher Education the power to: (1) "Authorize and encourage university system entities to enter

⁴¹⁸ *Id*.

⁴¹⁹ Policies, Regulations & Rules: Royalty Sharing Under NCSU's Patent Policy and Procedures, NC STATE UNIVERSITY, http://www.ncsu.edu/policies/research/REG10.00.3.php.

⁴²⁰ *Id*.

⁴²¹ *Id*.

⁴²² N.C. GEN. STAT. § 143-345.20 (West 2001).

⁴²³ N.D. CENT. CODE § 15-10-17 (2005).

into partnerships, limited liability companies, joint ventures, or other contractual arrangements with private business and industry for the purpose of business or industrial development or fostering basic and applied research or technology transfer"⁴²⁴; and (2) "Adopt rules promoting research, encouraging development of intellectual property and other inventions and discoveries by university system employees, and protecting and marketing the inventions and discoveries. The rules must govern ownership or transfer of ownership rights and distribution of income that may be derived from an invention or discovery resulting from research or employment in the university system. The rules may provide for transfer of ownership rights or distribution of income to a private, nonprofit entity created for the support of the university system or one of its institutions."⁴²⁵

The University of North Dakota, which operates under Article 8, section 6 of the North Dakota Constitution, has an IP policy for patents. Under the University's patent policy, the Institution will have sole and exclusive property of IP that results from its employee's research or investigation conducted in the course of their employment with the Institution, or with the use of the Institution's resources. It is basically the same for students. If the Institution decides to pursue commercialization, the Technology Transfer and Commercialization (TTC) Officer will outline a commercialization plan with the Inventor.

North Dakota State University's policies seem to be geared towards generating income for the University. The University retains "right[s] of first refusal to title of all patentable discoveries derived with the use of facilities, gifts, grants, or contract funds through the university." The policy requires inventors to assign all rights necessary for patent prosecution to the University "to assure that title in such Inventions shall be held by the Institution or other parties as may be appropriate under the circumstances." ⁴²⁸

⁴²⁴ N.D. CENT. CODE § 15-10-17(8) (2005).

⁴²⁵ Id.

⁴²⁶ UND Intellectual Property Policy, UNIVERSITY OF NORTH DAKOTA TECHNOLOGY TRANSFER & COMMERCIALIZATION: DIVISION OF RESEARCH, http://www.und.edu/dept/ttc/ppund.html.

⁴²⁷ Section 190: Employee Responsibility and Activities: Intellectual Property, NORTH DAKOTA STATE UNIVERSITY SBHE POLICY MANUAL, http://www.ndsu.nodak.edu/policy/190.htm.

⁴²⁸ *Id*.

Once the rights to a new invention have been assigned to the University, the University has six months in which to evaluate the invention and decide whether or not to pursue a patent on it. If the University decides not to pursue a patent for the invention, then all rights to the invention revert to the inventor. If the University does decide to pursue a patent for the invention, then the University will pay the inventor "a minimum of 30 percent of the net royalties and fees received by the Institution."

C.34.2 Specialized Funding Agency IP Policies

No information found.

C.35 Ohio

C.35.1 University IP Policies

Ohio University has a policy for dealing with issues related to IP development. This policy is known as Procedure 17.001, and its purpose is "[t]o provide a policy governing the ownership of intellectual property and associated University employee responsibilities." The policy has four state objectives: (1) to "create appropriate support mechanisms and incentives to encourage inventive work," (2) to "assure fair allocation of benefit between inventors and the University," (3) to "establish general guidelines for University personnel, industrial sponsors and funding organizations on the disposition of intellectual property," and (4) to "define the rights and responsibilities of faculty, staff and students. . . ."⁴³²

Under Procedure 17.001, all patentable inventions created at the University are the property of the University. The University strongly encourages inventors to "disclose all potential patentable intellectual property to the University." Once an invention is disclosed, the University will review the invention for commercialization potential, and decide whether or

⁴²⁹ Id.

⁴³⁰ *Id*.

⁴³¹ Intellectual Property Ownership and Disposition, and Employee Involvement in Research Commercialization, OHIO UNIVERSITY, http://www.ohiou.edu/policy/17-001.html.

⁴³² *Id*.

⁴³³ *Id*.

⁴³⁴ *Id*.

not to pursue commercialization of the invention. If the University does decide to commercialize the invention, then it owns all rights to do so. If the University decides not to commercialize the invention, then the inventor along with any other funding institutions gets the rights to commercialize the invention.

If the University does decide to step in and commercialize an invention, they will charge licensing fees to commercial entities who want to use the invention. The profits from these licensing fees are to be split between the inventor and the University in the following manner:

The first \$100,000 of annual royalties is divided up as follows:

- 50% as direct payment to inventor(s)
- 15% to department of the inventor(s)
- 10% to college of the inventor(s)
- 25% to the University

Any annual royalties above \$100,000 are divided up as follows:

- 30% as direct payment to inventor
- 20% to department of the inventor(s)
- 15% to college of the inventor(s)
- 35% to the University

Finally, policy 17.001 provides that all Tangible Research Property that is created as a result of the research is the property of the University. 438

Ohio has also statutorily created a state research commercialization grant program. 439

The purpose of the program is to improve the commercial viability of research projects by improving the ability of small technology companies to assess the commercial potential of research projects by promoting companies' competitiveness through the augmentation of federal research and development funding.

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    435 Id.
    436 Id.
    437 Id.
    438 Id.
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⁴³⁹ OHIO REV. CODE ANN. § 184.04 (West 2003).

The Ohio legislature has enacted laws governing the rights to discoveries and inventions resulting from certain state institutions. All rights to and interest in discoveries, inventions, or patents that result from research or investigation conducted in a state college or university, or by employees of any state college or university acting within the scope of their employment, or with funding, equipment, or infrastructure provided by or through any state college or university, shall be the sole property of that college or university. The college or university may retain, assign, license, transfer, sell, or otherwise dispose of, any and all rights to or interests in, inventions or patents which it owns or acquires.

C.35.2 Specialized Funding Agency IP Policies

Ohio statutorily created the "Third Frontier Commission" in its Department of Development, to coordinate and administer science and technology programs to promote the welfare of the state and its citizens, and to maximize state economic growth. The commission administers money appropriated to it by the general assembly for research and commercialization, and any other purposes the commission designates. Included in the commissions powers are the power to: facilitate alignment of the state's science and technology programs and activities, and to make grants and loans to individuals, public agencies, private companies or organizations, or joint ventures for any activities related to its purpose. Included in the commission's duties is the duty to make periodic strategic assessments (especially in biomedical research) of the types of investments in the state that would likely create jobs and business opportunities, and produce the most beneficial long-term improvements of the public health of Ohio citizens.

C.36 Oklahoma

C.36.1 University IP Policies

The Oklahoma State Regents for Higher Education was created by the Oklahoma Constitution⁴⁴², and is statutorily required to establish a model policy that could be adapted by

251

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⁴⁴⁰ OHIO REV. CODE ANN. § 3345.14 (West 2000).

⁴⁴¹ Ohio Rev. Code Ann. § 184.10 (West 2005).

⁴⁴² OKLA. CONST. ART. 13-A, § 2

the governing board of regents for each institution within the Oklahoma State System of Higher Education ("the system"), regarding (a) the use of facilities within the system to conduct research to develop/refine a product, process or idea in cooperation with a private business entity in order to market it for profit; (b) the investment of value available to institutions within the system in private business entities or the receipt of royalty income from a private business entity, or both, in conjunction with R&D conducted on the premises of or with the assistance of institutions within the system, its faculty, staff, or students; (c) a method to inform faculty, staff, students and third parties conducting research on premises of, or with the assistance of the faculty, staff or students of an institution within the system of the policies developed; (d) the extent to which professors, faculty, and students at institutions within the system may acquire property interests in technology developed on the premises of or with the assistance of an institution within system or a property interest in the revenues derived by the sale, marketing, licensing or other disposition of technology by an institution within the system or by a private business entity conducting research or engaged in the development of technology on the premises of or with the assistance of an institution within the system.

The Oklahoma State Regents for Higher Education is also required to establish policies for institutions within the system to: (a) encourage development of a product, process or idea, whether or not the product, process or idea is protectable under the IP laws of the United States or of the state, and to encourage the institutions to take such actions as may be appropriate in order to promote the development of products, processes or ideas having a potential for the improvement or advancement of: (1) medical technology, (2) biotechnology, (3) energy technology, (4) telecommunications technology, (5) chemical technology, (6) industrial technology, and (7) such other technologies as are deserving of the resources and assistance available through institutions and the faculty and students of institutions within the system; (b) develop appropriate methods to maintain a system for recording the nature of research being conducted at institutions within the system and the results of research having potential for protection pursuant to the IP laws of the United States or of this state; and (c) develop a system to account for (1) expenses associated with research and development conducted on the premises of or with the assistance of an institution within the system; (2) the financial relationships, if any,

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⁴⁴³ OKLA. STAT. ANN. tit. 70, § 3206.03 (West 1998).

established between those institutions and private business entities; (3) the acquisition of equity interests in private business entities, (4) the receipt of royalty income or other income related to the sale or other disposition of products, processes or ideas by institutions or private business entities with which the institution has established a financial arrangement, (5) the gains or losses upon the sale or other disposition of equity interests in private business entities, and (6) such other matters relating to the income and expenses associated with the research, development, IP protection, marketing, distribution or other matters as the State Regents determine to be appropriate.444

Institutions within the Oklahoma State System of Higher Education are statutorily required to report to the Oklahoma State Regents for Higher Education as requested, on forms provided by the Regents, research activities funded by external entities or institutions, the results of which have generated new IP. 445 Such forms will not be confidential, but rather are subject to full disclosure under the Oklahoma Open Records Act.

The Board of Regents of the University of Oklahoma has developed an IP policy. 446 The policy's objectives are to (1) maintain the University's academic policy of encouraging research, publication, and scholarship independent of potential gain from royalties or other income; (2) make patented materials created pursuant to University objectives available in the public interest under conditions that will promote their effective utilization and commercialization; and (3) provide adequate incentives and recognition to faculty and staff through proceeds derived from their creative works, trademarks, discoveries, and inventions. Regarding patents, the policy addresses ownership, revenue, asset management committee and policy, administration, disclosure, application, University patent committees, use of facilities, and background. The policy does not mention any provisions relating to equity investment and faculty/employee involvement in spin-off companies.

C.36.2 Specialized Funding Agency IP Policies

No specialized funding agency IP policies were found.

⁴⁴⁴ Id.

⁴⁴⁵ OKLA. STAT. ANN. tit. 51, § 24A.19 (West 1999).

⁴⁴⁶ The Board of Regents of the University of Oklahoma, Intellectual Property Policy, www.cimms.ou.edu/ipou.pdf.

C.36.3 Other

Oklahoma has a statutory incentive program that provides incentives for inventors, businesses, and manufacturers of products developed and manufactured in Oklahoma that are patented or have patents pending, and are registered with the Oklahoma Center for the Advancement of Science and Technology (OCAST). Royalties earned by an inventor from a product developed and manufactured in the state are exempt from state income tax for 7 years. Instate manufacturers of such products are eligible for a tax credit and can exclude 65% of the cost of depreciable property purchased and utilized directly in manufacturing the product from their Oklahoma taxable income or adjusted gross income (exclusion not to exceed \$500,000).

C.37 Oregon

C.37.1 University IP Policies

Oregon statutes allow the State Board of Education, as well as school districts and education services, to acquire interests in IP. 448

Oregon has a set of Administrative Rules Governing Intellectual Property Regarding the Board of Higher Education, Relating to Inventions, License Agreements, Educational and Professional Materials Development, Patents and Copyrights. Included in the Rules is the general policy of the Board to expeditiously make available to the public the inventions and technological improvements that result from employees' research activities. It is also the

⁴⁴⁷ OKLA. STAT. ANN. tit. 74, § 5064.7 (West 1998).

⁴⁴⁸ See Or. Rev. Stat. Ann. § 326.520 (West 2003).

⁴⁴⁹ See Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, Ch. 580, Div. 43, http://www.gsr.pdx.edu/technology/intellectual_property.html.

⁴⁵⁰ Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, 580-43-06, http://www.gsr.pdx.edu/technology/intellectual_property.html. See also Oregon Administrative Rules Governing Intellectual Property, Portland State University: Policy on Intellectual Property, 580-43-07, http://www.gsr.pdx.edu/technology/intellectual_property.html. (It is the Board's intent to provide a systematic means of bringing inventions, technological improvements and educational professional materials into the public domain, encourage development of new knowledge while protecting employees' academic freedom in publishing and developing inventions and improvements, and to establish principles regarding sharing royalty income with employees and sponsoring agencies in accordance with any agreements).

Board's responsibility to establish principles and procedures for sharing royalties with employees and, when required by agreement, with sponsoring agencies.⁴⁵¹

All Board and institution employees are required to agree to assign to the Board all rights to inventions or improvements that are conceived of or developed using institutional facilities, personnel, information or other resources, and materials resulting from the institution's instructions, research, or public service activities. Employees cooperate with and assist the Board, and must disclose to the institutions all inventions, technological improvements, and educational and professional materials developed or produced during normal activities. While obligated to assign their rights to the Board, employees may be able to share in the net royalty income of each invention, but their share of the royalties cannot exceed 40 percent of the first \$50,000, 35 percent of the next \$50,000, and 30 percent of all additional net royalty income received by the Board for inventions and technological improvements. Employees can also share 50 percent of net royalty income from educational and professional materials. The same responsibilities and benefits apply to graduate teaching assistants, graduate teaching fellows, graduate research assistants, and student employees.

Oregon institutions are required to actively encourage the development of subject matter and material falling under these rules. The state also requires that the Office of Administration Responsibilities assist and monitor institutions in the development and application of procedures implementing Board policies, and review and improve institutions' recommendations regarding the rights to innovations and improvements. The state also requires that the Office of Administration Responsibilities assist and monitor institutions in the development and application of procedures implementing Board policies, and review and improve institutions' recommendations regarding the rights to innovations and improvements.

Oregon State University has an IP policy that governs research conducted at the University. 457 In executing its policy, the University maintains a sample research agreement that

⁴⁵¹ *Oregon Administrative Rules Governing Intellectual Property*, Portland State University: Policy on Intellectual Property, 580-43-07, http://www.gsr.pdx.edu/technology/intellectual property.html.

⁴⁵² *Id*.

⁴⁵³ *Id*.

⁴⁵⁴ *Id*.

⁴⁵⁵ *Id*.

⁴⁵⁶ *Id*.

⁴⁵⁷ A Principles and Policies Guide for Sponsored Research, Oregon State University, http://oregonstate.edu/research/technology/policies/principles_guide.htm.

it uses as a starting point for research negotiations with sponsors, which aids towards the achievement of the University's goal of expedited negotiations. The University "retains the right to publish and disseminate all work done under sponsored research projects and cannot accept or undertake any sponsored project that provides for sponsor approval or undue control over the timing or content of university publications, or which prohibits the publication of the results of the project, except with limited restrictions." While the University retains title to all inventions and discoveries made or conceived by its employees, including efforts made under a sponsored project, the University grants sponsors a "time-limited first right to negotiate an exclusive or nonexclusive royalty-bearing license," with terms requiring that the sponsor secure and maintain patent protection for any licensed invention or discovery, using its own funds. 459 The two exceptions to this policy are (1) federally funded research, which are governed by Bayh-Dole; and (2) research sponsored by nonprofit organizations, universities, or state agencies, in which case the University typically grants the sponsor a nonexclusive royalty-free license to use inventions and discoveries for internal purposes only. The policy does not mention any provisions relating to equity investment and faculty/employee involvement in spin-off companies.

C.37.2 Specialized Funding Agency IP Policies

No information found.

C.38 Pennsylvania

C.38.1 University IP Policies

Pennsylvania's Public School Code of 1949 established a state system of higher education, including state institutions, which fall within the state's university system. Head Pennsylvania State University has an IP policy "to establish appropriate policies for ownership and management of University intellectual property. The policy requires students, staff and employees to sign an IP Agreement. The policy also requires that all University personnel

⁴⁵⁹ *Id*.

⁴⁵⁸ *Id*.

⁴⁶⁰ 24 PA. CONS. STAT. ANN. § 20-2002-A (West 1949)...

⁴⁶¹ Policy RA11 Patents and Copyrights (Intellectual Property), Pennsylvania State University, available at http://www.research.psu.edu/policies/academic.html.

disclose all inventions developed using University resources, or within the scope of an employee's employment, to the Intellectual Property Office. The policy does not mention any provisions relating to equity investment and faculty/employee involvement in spin-off companies.

Under statute, the Pennsylvania Department of Community and Economic Development of the Commonwealth ("department") may provide Keystone Innovation grants to institutions of higher education to facilitate technology transfer, including patent filings, technology licensing, IP and royalty agreements and other designated resource needs. The application must be on the form required by the department and must include or demonstrate the statutorily required information. Grants to applicants cannot exceed \$250,000 per year, or \$750,000 ever. There is a program cap of \$10,000,000, meaning the aggregate amount of grants awarded under the program cannot exceed that figure. 462

C.38.2 Specialized Funding Agency IP Policies

The Department of Community and Economic Development of the Commonwealth ("department"), in conjunction with the Department of Health, is required to establish three regional biotechnology research centers to facilitate research through the sharing of funds and infrastructure. The purpose of the centers is to develop and implement biotechnology research projects which promote and coordinate research in the state. The goal is that this would (1) Create or enhance research and related industries in Pennsylvania, (2) Develop high quality and commercially useful products or IP, (3) Attract venture capital investments, (4) Attract and retain prominent scientists, (5) Encourage training and educational programs, (6) Develop regional research specialties, and (7) Implement the commercial development of new research discoveries. The centers sign agreements with the state, outlining, among other things, the process for allowing access to and commercialization of IP, and the portion of biotechnology research center earnings which would be returned to the Health Account due to IP or products developed from the center's research.

Pennsylvania requires that all discoveries and patentable inventions resulting from the work of the Commonwealth Mental Health Research Foundation, its employees, or recipients of

⁴⁶³ 35 PA. STAT. ANN. § 5701.1703 (West 2001).

⁴⁶² 12 PA. CONS. STAT. ANN. § 3705 (West 2004).

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its financial aid, are to be assigned as property of the Foundation. 464 In accordance with this requirement, all Foundation employees and aid recipients must sign an agreement agreeing to assign and transfer all of their rights, title, and interest in any development or patent resulting from their employment or aid, to the Foundation. All royalties are paid to the Foundation.

C.39 Rhode Island

C.39.1 University IP Policies

The University of Rhode Island is created by Rhode Island statute⁴⁶⁵, and has an IP policy. The University's manual defines policy and procedures for dealing with IP generated by University personnel, or offered to it by alumni or friends. The policy is intended to comply with federal law, and it discusses disclosure, methods of determining ownership, and procedures for obtaining IP protection. The policy also calls on the University of Rhode Island Foundation to play a role in the commercialization of resulting innovations, as well as in the safeguarding of royalty income, which it says is "a potentially important source of revenue for both the creator of the intellectual property and the University."

Regarding ownership, "The Board of Governors shall own and have all rights to any inventions, trademarks, trade secrets, and copyrights discovered, created, or developed by University personnel using University time, resources, facilities, or equipment, except as otherwise provided in this policy. This shall include, but not be limited to, inventions that are (a) developed in the course of or pursuant to a sponsored project or other agreement, or (b) developed under a written agreement with URI and with funds provided by the University, or (c) developed using University time, resources, facilities, or equipment, or (d) offered to the University by any creator and accepted by the Board of Governors, or (e) copyrights in copyright material created as a work-for-hire or other material as indicated" In making the ownership determination, the Board uses a decision-tree approach that considers, among other things, whether property was created using University support, and whether it was developed in the

258

⁴⁶⁴ 62 Pa. Stat. Ann. § 1148.

⁴⁶⁵ R.I. GEN. LAWS § 16-32-1.

⁴⁶⁶ The University of Rhode Island, University Manual, Chapter 10, Administrative Procedures, *available at* http://www.uri.edu/research/tro/UManual1040.htm.

course of a University-administered sponsored research agreement. The policy does not mention any provisions relating to equity investment and faculty/employee involvement in spin-off companies.

C.39.2 Specialized Funding Agency IP Policies

No information found.

C.40 South Carolina

C.40.1 University IP Policies

South Carolina statutorily established the State Commission on Higher Education in 1976, to reach the goals of, among other things, affordable and accessible education, instructional excellence, and economic growth. The University of South Carolina's Office of Intellectual Property has established a policy for IP development and technology transfer, both of which conform to the goals of the State Commission on Higher Education. The policy's objectives are to help attract resources to support faculty, staff, and students in activities that may lead to IP development; provide services to faculty, staff, and students to enable them to identify and protect IP, facilitate, in cooperation with the inventor/creator, the efficient transfer of technology from the University to the private sector in service of the public interest; and to promote local and national economic development.

The University's Intellectual Property Office (IPO) follows the mandates of Bayh-Dole, which enables the University to retain the entire right, title, and interest in government funded inventions to universities and businesses operating with federal contracts for the purpose of further development and commercialization. Furthermore, the University also has an Intellectual Property Committee (IPC). 470

The University IP policy covers disclosure of IP, requiring that inventors disclose all IP in confidence to the University promptly and before any public release. It also covers

259

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The University of Rhode Island, University Manual Appendix H, Figure 1, *available at* http://www.uri.edu/facsen/figureone.pdf.bin.

⁴⁶⁸ S.C. CODE ANN. §§ 59-103-10, 59-103-15.

⁴⁶⁹ University of South Carolina Office of Intellectual Property, Intellectual Property Policy and Procedures, http://www.ip.research.sc.edu/policy_new.shtml.

⁴⁷⁰ *Id*.

ownership, requiring that the University own all IP conceived or reduced to practice by University faculty, staff, or students as a result of (a) research that makes substantial use of USC resources or facilities, (b) activities that fall within the inventor's scope of employment with the University, whether or not USC resources or facilities are used, or (c) work supported by funds that are administered through USC. ⁴⁷¹

In cases where an inventor believes that an invention was conceived or reduced to practice independently of USC, the University offers a procedure wherein the inventor can make a claim of ownership. The IPC serves as the body from which the inventor or the IPO can obtain an impartial review regarding issues of ownership. 472

The IPO is also responsible for choosing the most appropriate commercialization option, including: licensing to third parties; licensing with business entities in which an inventor holds an ownership or management interest; and reassignment of ownership to inventors if inventors wish to market, protect, and license the IP on their own with minimal University involvement. (The return to the University for a reassignment of ownership will consist of recovery of any University patent and licensing expenses and up to 15% of royalties, equity, or other value received by inventors). Where the University is owner of IP, it will distribute a substantial portion of net revenues to the faculty, staff, or student inventors/creators as personal income. Regarding equity investment and faculty/employee involvement in spin-off companies, the policy does allow the University to enter into license agreements with business entities in which the inventor/employee holds an ownership interest. Terms in such agreements may include royalty payment, equity interest, or a combination thereof. 474

C.40.2 Specialized Funding Agency IP Policies

No information found.

⁴⁷¹ *Id*.

⁴⁷² *Id*.

⁴⁷³ *Id*.

⁴⁷⁴ *Id*.

C.40.3 Other

South Carolina has enacted the Venture Capital Investment Act of South Carolina, 475 which was passed to increase the availability of equity, near-equity, or seed capital for emerging, expanding, relocating, and restructuring enterprises in the state, as well as to address the long-term capital needs of smaller firms. Investor groups are required to provide annual reports with statutorily required information, including a schedule of the rates of return, net of total investment expense, and sum of total investment expense for the fiscal year. The Act also established the South Carolina Technology Innovation Fund, which is used to award small grants for the best creative ideas from South Carolina research universities' technology incubators, awarded to inspire and encourage knowledge-based technology and IP transfers from research university faculty and students to the marketplace.

C.41 South Dakota

C.41.1 University IP Policies

South Dakota's Board of Regents oversees all higher education institutions within the state. The Board created a standard IP policy for all educational institutions in South Dakota.

All IP created using an educational institution's funds and resources, while in the course of employment, will be property of the institution. Unless a work is commissioned by the institution, it will not retain copyright ownership for scholarly or creative works. Ownership of IP created using outside sponsorship is subject to contract negotiations with individual educational institutions. If an educational institution commercializes an inventor's IP, the inventor is to receive fifty percent of all net revenues. If the institution accepts funding from an outside sponsor wishing to retain ownership of the IP, the contract must contain an exclusive option for the school to have first refusal of an exclusive license. 476

⁴⁷⁵ S.C. CODE ANN. § 11-45-10.

⁴⁷⁶ South Dakota Board of Regents Policy Manual, Appendix R, http://www.sdbor.edu/administration/policy_planning/agreements/COHE_Agree/documents/appendr.pdf (last visited 03/16/2007).

C.41.2 Specialized Funding Agency IP Policies

South Dakota enacted the Certified Beef Program to create standard rules for beef production and processing. State ownership and licensing of IP in relation to this program is under the administration of the Secretary of Agriculture.

South Dakota Certified Beef Program - Promulgation of rules

The secretary of agriculture may by rule promulgated pursuant to chapter 1-26, prescribe the following:

- (1) Qualifications or conditions for using any intellectual property right, mark, or label of the South Dakota Certified beef program;
- (2) Reasonable fees for licenses and services of the program, such fees to be reasonably commensurate with the cost of developing, administering, and marketing the program;
- (3) License application procedures, the terms and conditions of any license, and any official form the secretary deems necessary and appropriate;
- (4) Methods and means of conducting inspections, keeping records, and otherwise insuring program compliance by participants in the program; and(5) Provisions to maintain the confidentiality of business information provided to the secretary by participants in the program.⁴⁷⁷

In 2004, South Dakota started the 2010 Initiative in order to revitalize its economy and attract R&D to South Dakota. The 2010 Initiative called for developing the state's research and technology infrastructure. The 2007 Budget Briefing on Tourism and State Development includes funds dedicated to creation of a unified IP policy at South Dakota's universities. Under the 2010 Initiative, the Board of Regents was instructed to modify their IP royalty policy to increase inventor royalties on net revenues from 25% to 50%.

⁴⁷⁷ South Dakota Certified Beef Program, Title 39, Chapter 24, § 6, http://legis.state.sd.us/statutes/DisplayStatute.aspx?Type=Statute&Statute=39 (last visited 03/16/2007).

⁴⁷⁸ 2010 Initiative, Action Steps, Goal 3 - Become a Recognized Leader in Research and Technology Development by 2010, http://www.2010initiative.com/Progress/Goal3.htm (last visited 03/16/2007).

⁴⁷⁹ South Dakota 2007 Budget, http://www.state.sd.us/bfm/budget/Rec07/SD_REC_BUDGET_FY07.pdf , (last visited 03/16/2007).

⁴⁸⁰ *Id*.

C.42 Tennessee

C.42.1 University IP Policies

Tennessee's higher education institutions are governed by the Tennessee Board of Regents. The Board created a standard IP policy for all institutions. Ownership of IP created using institution resources will belong to the Board unless the inventor and the Board agree beforehand. Ownership of scholarly works will remain with the creator. In the event that Federal funds are involved, disclosure must conform with Bayh-Dole requirements. Any income arising from commercialization of IP will first go to pay school expenses before it is shared with the inventor. Each institution can have its own income distribution policy but in no case can the inventor or creator receive less than forty percent of income realized from IP. 482

C.42.2 Specialized Funding Agency IP Policies

Tennessee has criminal penalties for violation of IP rights (Tennessee Code §39-14-152, §39-14-601). There are also IP provisions in the Tennessee Code that deal with taxation, child labor, and debt repayment. However, there are no policy provisions for state funded research or state management of IP through grants. Tennessee currently does not have a statewide initiative or policy regarding IP realized from state funding.

C.43 Texas

C.43.1 University IP Policies

Texas has legislated minimum standards for the IP policies of its higher education institutions. This allows each institution to create its own policies and receive state funding as long as the institution "address[es] as a minimum standard the following matters:

(1) disclosure of scientific and technological developments, including inventions, discoveries, trade secrets, and computer software;

263

- (2) institutional review of scientific and technological disclosures, including consideration of ownership and appropriate legal protection;
- (3) guidelines for licensing scientific and technological developments;

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⁴⁸¹ Tennessee Board of Regents Intellectual Property Policy, http://www.tbr.state.tn.us/general counsel/ip/IP Policy.htm (last visited 03/16/2007).

⁴⁸² *Id*.

- (4) clear identification of ownership and licensing responsibilities for each class of intellectual property;
- (5) royalty participation by inventors and the institution; and
- (6) equity and management participation on the part of the inventor or inventors in business entities that utilize technology created at the institution of higher education."⁴⁸³

By legislating minimum standards each institution can create specific IP policies to suit its needs while conforming to state policy requirements.

"The [Texas] Legislature, which is given the duty and authority to provide for the maintenance, support, and direction of The University of Texas by Article VII, Section 10 of the *Texas Constitution*, has delegated the power and authority to administer The University of Texas System to the Board of Regents." Accordingly, the Texas Board of Regents promulgates policies within the University of Texas (U.T.) system, including rules and policies relating to IP. 485 Key elements of the U.T. IP policies follow:

- "Intellectual property either developed within the course and scope of employment of the individual or resulting from activities performed on U.T. System time, or with support of State funds, or from using any facilities or resources owned by the U.T. System or any of its institutions (other than incidental use) is owned by the Board of Regents." 486
- If U.T. elects not to assert an ownership interest on an IP asset "the institution will offer the released intellectual property to the creator." 487
- Licensing costs, including costs of patent prosecution and costs to operate a technology transfer office, must be recaptured prior to any distribution of royalty income. The remainder of the royalty income is divided 50% to the creator(s) and 50% to the U.T. System. 488

⁴⁸³ Texas Education Code, § 51.680.

⁴⁸⁴ Texas Education Code Section 65.11 et seq.

⁴⁸⁵ http://www.utsystem.edu/bor/rules.htm#A2

⁴⁸⁶ http://www.utsystem.edu/bor/rules/90000Series/90102%202004%2012%2010%2001.pdf

⁴⁸⁷ *Id*.

⁴⁸⁸ Id.

- In agreements with business entities relating to IP rights "the U.T. System may receive equity interests as partial or total compensation for the rights conveved." 489
- Employees of the U.T. System may hold an equity interest, or serve as an officer or director, in a business entity relating to research, development, licensing or exploitation of IP so long as there is an effective conflict of interest management plan approved by U.T. If actual conflict of interest is found, the employee may be required to divest the equity interest, terminate affected research, or terminate the business relationship."⁴⁹⁰

Additionally, as part of Texas' plan to stimulate and ensure economic growth, the Texas Higher Education Board was made the controlling entity for the Advanced Technology Program (ATP) and the Advanced Research Program (ARP). Chapter 142 of the Texas Education Code created the ARP "to encourage and provide support for basic research conducted by faculty members". Funding is through grants, gifts and donations and must be at least ten percent "of the average amount of the federally sponsored research funds allocated to all institutions of higher education annually during the preceding three years." Chapter 143 of the Texas Education Code created the ATP to "exploit the potential of technology to advance the development and growth of technology and that industry be promoted and expanded." The ATP also provides funding to private and public higher education institutions for applied research. Research project progress will be reviewed regularly.

The Texas Higher Education Coordinating Board (THECB) has been made a coordinating entity for a considerable amount of state funded research. It further functions as an administrative body for grants, donations and gifts. The THECB is a supervisory entity for Texas' private and public higher education institutions, reporting directly to the Governor and the Legislative Budget Board. The ARP and the ATP are supervised by the THECB. The

⁴⁸⁹ http://www.utsystem.edu/bor/rules/90000Series/90103%202004%2012%2010%2001.pdf

⁴⁹⁰ Id.

⁴⁹¹ Texas Education Code, Title 3, Chapter 61, Texas Higher Education Coordinating Board.

⁴⁹² *Id*.

⁴⁹³ Conference Committee Report on Senate Bill 1 for the 2006 –2007 Biennium, 79TH Legislative Session, Legislative Budget Board May 2005, p. III-47, http://www.lbb.state.tx.us/Bill_79/6_Conference/79-6_Conf_0505.pdf#page=265 (last visited 03/16/2007).

ARP "...supports research designed to attract and retain the best students and researchers and to help provide the knowledge base needed for innovation." ARP funds are for high-risk, high-payoff research. The ATP was created to help University scientists create new products and processes, and apply that research to state business creation. Both the ARP and ATP exist to stimulate in-state research, gain maximum funding dollars, and create research jobs. Texas has determined that IP is significantly intertwined with the goals of both programs.

As a subgroup of the ATP project, the Technology Development and Transfer Program (TDT) was created to support transferring THECB created technology from the higher education research system to the private sector. The program has been in place since March 2003. Its impact on IP within Texas is still unclear. 498

The ARP and ATP programs have oversight committees, which grant state funds to higher education institution researchers based on merit reviews. The oversight committees require progress report and milestone achievements from all grantees in order to maintain funding. ⁴⁹⁹ IP arising from state funded research through higher education institutions remains property of the institution, unless otherwise agreed. Licensing and commercialization may be coordinated by the institution but it may also be subject to a prior agreement between the

⁴⁹⁴ Impact Assessment of the Advanced Research Program, Executive Summary of Final Report, http://www.researchintexas.com/ARPImpactStudyExec.pdf (last visited 03/16/2007).

⁴⁹⁵ Impact Assessment of the Advanced Technology Program, Executive Summary, http://www.arpatp.com/ATPImpactStudyExec.pdf (last visited 03/16/2007).

⁴⁹⁶ ATP, ADT, and TDT Research Grant Programs, http://www.thecb.state.tx.us/reports/pdf/0760.pdf (last visited 03/16/2007).

⁴⁹⁷ THECB Chapter 14, Subchapter D, Technology Development and Transfer Program, http://www.thecb.state.tx.us/Rules/Tac3.cfm?Chapter_ID=14&Subchapter=D&Print=1 (last visited 03/16/2007).

⁴⁹⁸ *Id*.

⁴⁹⁹ THECB Rules Currently in Effect, Chapter 14. Research Funding Programs, Subchapter E. Procedural Administration of the Research Funding Programs, http://www.thecb.state.tx.us/Rules/tac3.cfm?Chapter_ID=14&SubChapter=E#14.76 (last visited 03/16/2007).

institution and the inventor. 500 Royalty distributions are also determined at the discretion of the institution. 501

Texas has kept track of IP activity through the ARP and ATP programs, including: patents filed, patents issued, copyrights registered, licensing and follow-on research funding. Recent ARP and ATP reports include economic return numbers for IP produced as a result of industry, education institution, and state collaborations. Texas has also issued brief summaries of outcomes and economic impact from the ARP/ATP programs, including their IP impact. The program has yielded two "home run" success stories where funding resulted in the creation of multi-billion dollar companies. The program has yielded two "home run" success stories where funding resulted in the creation of multi-billion dollar companies.

C.43.2 Specialized Funding Agency IP Policies

In 2001, Texas Governor, Rick Perry, issued Executive Order RP10 created the Governor's Council on Science and Biotechnology Development. The purpose of the council was to:

 Identify opportunities and means to promote cooperation and collaboration among universities to bring more federal research funds to Texas and to improve the universities and to contribute to economic growth; and

⁵⁰⁰ University of Texas IP Rules and Regulations, http://www.utsystem.edu/bor/rules/90000Series/90103%202004%2012%2010%2001.doc (last visited 03/16/2007); University of Huston IP Rules, http://www.thecb.state.tx.us/AAR/DistanceEd/Plans/UHAttachI.doc (last visited 03/16/2007).

⁵⁰¹ *Id*.

⁵⁰² ARP Impact Study - Executive Summary, http://www.researchintexas.com/ARPImpactStudyExec.pdf (last visited 03/16/2007); ARP Impact Study - Full Report, p. 16-18, http://www.researchintexas.com/ARPImpactStudy.pdf (last visited 03/16/2007); ATP Impact Study - Executive Summary, http://www.arpatp.com/ATPImpactStudyExec.pdf (last visited 03/16/2007); ATP Impact Study - Full Report, p. 12-13, http://www.arpatp.com/ATPImpactStudy.pdf (last visited 03/16/2007).

⁵⁰³ Quantifiable Outcomes of ARP/ATP Research Projects, http://www.thecb.state.tx.us/reports/pdf/0738.pdf (last visited 03/16/2007); Economic Impact of ARP/ATP, http://www.researchintexas.com/Impact.pdf (last visited 03/16/2007).

⁵⁰⁴ Two Billion-Dollar Companies, http://www.researchintexas.com/BillionDollarCompanies.pdf (last visited 03/16/2007).

⁵⁰⁵ Office of The Governor, Rick Perry, Executive Order RP10 - January 17, 2001 http://www.governor.state.tx.us/divisions/press/exorders/rp10 (last visited 03/16/2007).

- 2. Propose state policies and actions that promote technology development and transfer in Texas including the creation of partnerships that support and benefit the establishment of new technology industries in all areas of Texas; and
- 3. Analyze and propose state policies that encourage ready availability and accessibility of venture capital and commercial lending, especially in areas of the state seeking to increase high tech development through the establishment of Regional Councils; and
- 4. Promote connectivity and synergy among sectors, including access to capital to create a statewide approach to make Texas a top biotech destination; and
- 5. Produce an annual report tracking the Council's progress to be presented to the Governor; and
- 6. Perform other duties as assigned by the Governor. 506

The Council recommendations have been incorporated by the biotech industry cluster.

As part of its ongoing attempts at economic growth, Texas created an industrial cluster model in October 2004, to focus development for six key industries: biotech, energy, advanced manufacturing, information technology, petroleum and aerospace. Each industry cluster is encouraged to work closely with state agencies and educational institutions for research, funding and employment. Each cluster created a general industry report in August 2005. The reports noted the importance of IP management and collaboration with state funding bodies and higher education institutions but a comprehensive policy has not yet been created by any cluster. ⁵⁰⁸

⁵⁰⁶ *Id*.

Id.

⁵⁰⁷ Texas Industry Partner Web Pages, Locating Industry Partners by Industry Sector, http://www.texasindustryprofiles.com/apps/partners/search.asp (last visited 03/16/2007).

⁵⁰⁸ Texas Industry Profiles, http://www.texasindustryprofiles.com/ (last visited 03/16/2007); Biotech Cluster Report, http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasBiotechnologyandLifeSciencesCluster.pdf (last visited 03/16/2007); Energy Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasEnergyCluster.pdf (last visited 03/16/2007); Advanced manufacturing Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasAdvancedTechnologiesandManufacturingClust er.pdf (last visited 03/16/2007); Info Technology Cluster Report,

http://www.texasindustryprofiles.com/PDF/twcClusterReports/TexasITCluster.pdf (last visited 03/16/2007); Petroleum Cluster Report,

http://www.texas industry profiles.com/PDF/twcClusterReports/Texas PetroleumRefining and Chemical Products Cluster r.pdf (last visited 03/16/2007); Aerospace Cluster Report,

 $http://www.texas industry profiles.com/PDF/twcClusterReports/TexasAerospace and Defense Cluster.pdf \ (last\ visited\ 03/16/2007).$

C.44 Utah

C.44.1 University IP Policies

The Utah System of Higher Education consists of 10 public colleges and universities governed by the Utah State Board of Regents, assisted by a local Board of Trustees. ⁵⁰⁹ The system includes two major research/teaching universities – the University of Utah and Utah State University. Utah's higher education institutions are also part of Utah's Centers of Excellence (COE). Each COE is affiliated with an educational institution. ⁵¹⁰

The University of Utah, in conjunction with the University's Technology Transfer Office and the University of Utah Research Foundation, has outlined the following Patents and Inventions Policy. 511 In general, the University of Utah will acquire and retain title "to all inventions, discoveries and improvements made as a result of University employment or research, or created through the use of time, facilities, equipment or materials owned or paid for by or through the University." ⁵¹² "The University of Utah Research Foundation is the instrument of the University that commercializes inventions through royalty agreements with external organizations. The University assigns to the University of Utah Research Foundation all rights to those patents that should be exploited. Any surplus funds realized by the Foundation from this activity are allocated to fund the research and education programs of the University."513 The inventors' share of royalty income "shall normally be forty percent of the first twenty-thousand dollars of net revenue, thirty-five percent of the next twenty-thousand dollars of net revenue, and thirty percent of any additional net revenue received by the Research Foundation."514 "If the University/Foundation determines that it does not wish to cover the expenses required to obtain patent protection, the University/Foundation will permit the inventor to pay all such expenses and thereafter to share any royalty or other revenue with the inventor" on the basis of "sixty-five

⁵⁰⁹ Utah System of Higher Education, available at: http://www.utahsbr.edu/col03a.html (last visited April 26, 2007).

⁵¹⁰ Governor's Office or Economic Development, Find a Center by Cluster, http://goed.utah.gov/COE/clusters/index.html (last visited 03/16/2007).

⁵¹¹ Patent and Inventions Memo, available at http://www.admin.utah.edu/ppmanual/6/6-4.html (last visited April 26, 2007).

⁵¹² *Id*.

⁵¹³ *Id*.

⁵¹⁴ *Id*.

percent to the inventor and thirty-five percent to the University after the inventor has been reimbursed for patent expenses."515

Similarly, Utah State University acquires and retains all rights to all creative works of its employees within the scope of their employment and works in conjunction with an Office of Technology Commercialization and the Utah State University Research Foundation. A monetary award of \$1,000 in total shall be distributed to the inventor(s) of an intellectual property upon which a patent is granted by the University. For licensed patents, deductions for expenses are taken from gross royalty income and remaining income is distributed among inventors, the University, and generating units, with inventors taking 40%-50% of the income after deductions. The University share is used to provide University-wide research support.

C.44.2 Specialized Funding Agency IP Policies

Much of Utah's IP is managed through economic development initiatives and technology commercialization. Utah has an industry cluster model which works in conjunction with defined COEs at the state's public and private higher education institutions. The industry clusters are: aerospace, defense and homeland security, competitive accelerators, energy and natural resources, financial services, life sciences, and software development and information technology. ⁵¹⁹ The Governor's Office of Economic Development (GOED) selects proposals and approves funding for each center. Aside from economic development, the centers also function in transferring technology into the marketplace and helping companies with the patent process. ⁵²⁰

The Utah Science, Technology and Research initiative (USTAR) was created as an initiative of the Utah State legislature to bolster Utah's high-tech economy by investing in

⁵¹⁵ *Id*.

⁵¹⁶ Utah State University Policy Manual, available at: http://www.usu.edu/hr/policies/327.htm (last visited April 26, 2006).

⁵¹⁷ *Id*.

⁵¹⁸ *Id*.

⁵¹⁹ Governor's Office or Economic Development, Find a Center by Cluster, http://goed.utah.gov/COE/clusters/index.html (last visited 03/16/2007).

⁵²⁰ Utah Economic and Business Review, July/August 2006, Volume 66 Numbers 7 & 8, http://www.business.utah.edu/humis/docs/organization_936_1169837721.pdf (last visited 03/16/2007).

University research programs.⁵²¹ USTAR also acts as an entity connecting companies, entrepreneurs and researchers.⁵²² For FY 2007, the USTAR initiative amounts to nearly \$220 million523. No specific information was identified regarding USTAR's IP policies.

In Title 63, chapter 45a sections 1-4⁵²⁴, Utah enacted legislation for its Tar Sands Pilot Plant Program. The purpose of the Tar Sands Pilot Plant legislation is "to stimulate and encourage the development and commercial production by private industry of hydrocarbons from the tar sands deposits lying within the state of Utah ... and to so do by providing for the design, construction, and operation of a pilot plant to be employed for the purpose of demonstrating the commercial viability of processes for the recovery of hydrocarbons from the tar sands deposits of the state through certain funding by the state in conjunction with funding furnished from other sources, both public and private."⁵²⁵ To this end, the state advisory council has been authorized to build pilot plants. Any plant or production for it will be owned by Utah. ⁵²⁶

Ownership of IP discovered or developed through Utah's Tar Sands Pilot Plant project is described in Title 63, Chapter 45a, Section 4 of the Utah Code.

C.45 Vermont

C.45.1 University IP Policies

The University of Vermont (UVM) is the major research university in the state and is a focal point for Vermont's research initiatives. Although there are other private and public higher education institutions, UVM appears to be a focal point for state funded research. UVM has its own IP policy⁵²⁷ and its own licensing department, the Office of Technology Transfer (OTT).⁵²⁸

⁵²¹ Utah Science, Technology, and Research Initiatives, http://www.ustar.usu.edu/ (last visited April 26, 2007).

⁵²² *Id*.

⁵²³ *Id*.

⁵²⁴ Utah Code - Title 63 - Chapter 45a - Tar Sands Pilot Plant, http://le.utah.gov/~code/TITLE63/63_1C.htm (last visited 03/16/2007).

⁵²⁵ Utah Code - Title 63 - Chapter 45a – Section 1, Legislative Findings -- Purpose of the Act, http://le.utah.gov/~code/TITLE63/htm/63_1C002.htm (last visited 03/16/2007).

⁵²⁶Utah Code - Title 63 - Chapter 45a - Section 3, Contract for pilot plant - Contents - Financing - Termination of contract, http://le.utah.gov/~code/TITLE63/htm/63 1C004.htm

⁵²⁷ http://www.uvm.edu/~uvmppg/ppg/general_html/intellectualproperty.pdf (last visited 03/16/2007).

The OTT publicizes available technologies and helps create licensing agreements with private users. 529

All IP, except for scholarly or creative works, created using UVM resources or within the scope of employment will be owned by UVM. Net income from royalties arising from commercialization of IP, will first go to pay any UVM costs. The inventor will receive 45% of subsequent royalties. For copyright and non-patenting IP, the author will receive 100% of the first \$18,000. The inventor will then receive 45% of subsequent royalties.

C.45.2 Specialized Funding Agency IP Policies

Vermont has decided to fund research and high-tech business development but has not focused on creating an IP policy. The state created the Vermont Technology Council to oversee science and technology planning. Aside from job creation and high-tech industry development, the council examined methods of funding research and technology transfer. As of August 2006, a goal was to create the Vermont Commercialization Fund to help commercialize promising research from the state's educational institutions (such as UVM).

The Experimental Program to Stimulate Research (EPSCoR) is a private non-profit organization which works with the University of Vermont and other private and public higher education institutions to provide access to research funding. ⁵³⁰

C.46 Virginia

C.46.1 University IP Policies

The University of Virginia was founded in 1819 by Thomas Jefferson.⁵³¹ Patents and copyrights at "The University" are vested in the University of Virginia Patent Foundation.⁵³² The Patent Foundation seeks to commercialize and receive royalties from patents created by the University's faculty and students, and to reinvest the royalties thus obtained back into

⁵²⁸ University of Vermont Office of Technology Transfer, http://www.uvm.edu/~techtran/ (last visited 03/16/2007).

⁵²⁹ University of Vermont Office of Technology Transfer, Corporate Visitors Site, http://www.uvminnovations.com/ (last visited 03/16/2007).

⁵³⁰ Vermont Experimental Program to Stimulate Competitive Research, http://www.uvm.edu/EPSCoR/index.php?ContentID=27 (last visited 03/16/2007).

⁵³¹ Short History, http://www.virginia.edu/uvatours/shorthistory/# (last visited April 6, 2007)

⁵³² Main, at http://www.uvapf.org/ (last visited March 19,2007)

research.⁵³³ The University's patent policy uses a sliding scale to determine proportional royalties.⁵³⁴ Inventor's entitlement range from 40% when the invention makes \$99,999 or less to 15% when the invention makes more than \$1,000,000. The school, and the scholarly activities fund, receive from 0% to 20% and 10% respectively.⁵³⁵ The University has a policy requiring disclosure of conflicts of interest that has also been adopted by the Patent Foundation.⁵³⁶ University employees must disclose all conflicts of interest, though employees receiving a consulting or other fee of \$10,000 or more per year, and who either have no authority or disqualify themselves from negotiating the contract for either party, do not have a conflict.⁵³⁷ The Patent Foundation's policy for licensing of patents to start-ups stresses the need for a fair license to all parties.⁵³⁸ The University will support the license as far as this assists its academic mission, and any equity position in the start-up company licensee will be passive and non-managerial.

C.46.2 Specialized Funding Agency IP Policies

Virginia has a number of research funding agencies, with an executive official responsible put in place to help develop and commercialize IP in the state.⁵³⁹ The Secretary of Technology is responsible to the Governor of Virginia for the following state agencies: Information Technology Investment Board, Innovative Technology Authority, Virginia Information Technologies Agency, Virginia Geographic Information Network Advisory Board,

⁵³³ *Id*.

⁵³⁴ Vice President for Research and Public Service, *Patent Policy*, at http://www.virginia.edu/finance/polproc/pol/xve2.html (last visited March 19,2007).

⁵³⁵ *Id*.

⁵³⁶Conflict of Interest Policy and Statement, http://www.uvapf.org/resources/policies/index.cfm/fuseaction/viewpage/page_id/93?CFID=1691298&CFTOKEN=77749068& (last visited April 18, 2007)

⁵³⁷ Resolution of conflicts of interest as they relate to research contracts, http://www.virginia.edu/finance/polproc/pol/viiib1.html (last visited April 18, 2007)

⁵³⁸ Patent Foundation Guidelines for Licensing to Faculty Start-ups,
http://www.uvapf.org/resources/policies/index.cfm/fuseaction/viewpage/page_id/100?CFID=1691298&CFTOKEN
=77749068& (last visited April 18, 2007)

⁵³⁹ Virginia Stat. §2.2-225

the Wireless E-911 Services Board, and the Virginia Research and Technology Advisory Commission." ⁵⁴⁰

The Joint Committee on technology and science is a permanent legislative agency of Virginia. It is comprised of members of both legislative houses, and issues reports on specific issues in Technology and Science. The Virginia Information Technology Agency and Virginia Information Technologies Investment Board are the state entities responsible for investment in information technology in the state. The Board is headed by a Chief Information Officer (CIO), and is charged with prioritizing investment in IT throughout the state. As such, it appears to be involved with investment in IT throughout the state, rather than funding research.

The Virginia Research and Technology Advisory Commission advises the Governor of Virginia on issues related to Research and Technology within the state, with an emphasis on policy recommendations designed to enhance competitiveness in research and commercial technology.⁵⁴⁴ Its University and Federal Laboratory Subcommittee, specifically, issues reports designed to direct investment in research in the state. In its 2007 report, the University and Federal Laboratory Subcommittee of VRTAC requested an investment of \$45 million per year for 5 years by the state in order to support research in three identified areas in which the state was thought to be able to achieve acclaim.⁵⁴⁵ The \$45 million would be accompanied by a \$15 million dollar "cost-share" with Universities, private industry, and the Federal Government.⁵⁴⁶ The report does not indicate that the state would claim a proprietary interest in research or site building so funded.

⁵⁴⁰ *Id*.

⁵⁴¹ Virginia Stat. §30-86

⁵⁴² Virginia Stat. §2.2-2005

⁵⁴³ *Id*.

⁵⁴⁴ Home, http://www.cit.org/VRTAC/index.html (last visited April 6, 2007)

⁵⁴⁵ Collaborative Research and Development Strategies and Directions for the Commonwealth of Virginia, http://www.cit.org/VRTAC/vrtacDocs/07-03-05-VRTAC Univ-Fed Lab report.pdf (last visited April 6, 2007)

⁵⁴⁶ *Id*.

C.47 Washington

C.47.1 University IP Policies

Washington has two large state research universities: Washington State University (WSU) and the University of Washington (UW).⁵⁴⁷ Washington State University (WSU) is a large research university with multiple sites in Washington State, with an enrollment of approximately 23,428 students.⁵⁴⁸ It was founded in 1861.⁵⁴⁹

The entity in charge of its tech transfer activities, primarily licensing, is the WSU Research Foundation (WSURF).⁵⁵⁰ The WSU Office of Intellectual Property Administration (OIPA) makes the determination of whether patent protection will be sought following disclosure of an invention by a WSU Faculty member.⁵⁵¹ It is the stated policy to offer the federal government the opportunity to patent an invention if OIPA does not want it.⁵⁵² After IP protection is sought, and once a possible licensing partner is located, the intellectual property will then be assigned to WSURF, which manages and licenses it.⁵⁵³ After accounting for legal fees, and subtracting 20% for WSURF, revenue for patented inventions is shared with inventors on a sliding scale: for revenue below \$10,001, 100% to the inventor, for \$10,001-\$200,000, 50% to the inventor and 50% to the University, and finally for above \$200,000, 25% to the inventor and 75% to the University.⁵⁵⁴ Policy promulgated pursuant to State Ethics statutes states that: "No state officer or state employee may employ or use any person, money, or property under the

⁵⁴⁷ Washington Colleges and Universities, http://www.hecb.wa.gov./Links/colleges/collegesindex.asp (last visited April 18, 2007).

⁵⁴⁸Profile of Washington State University, at http://www.wsu.edu/future-students/why-wsu/wsu-profile/profile.html (Last visited March 19, 2007).

⁵⁴⁹ The Need for New Campus, http://www.lib.washington.edu/exhibits/site/decision.html (last visited April 6, 2007)

⁵⁵⁰WSU Research Foundation, at http://webproofs.wsu.edu/wsurf/public/index.html (last visited March 19, 2007.

⁵⁵¹OIPA Process, at http://webproofs.wsu.edu/wsurf/public/Inventors/oipaprocess.html (last visited March 19, 2007).

 $^{^{552}}$ *Id*.

 $^{^{553}}Id.$

⁵⁵⁴ Intellectual Property Policy, http://webproofs.wsu.edu/wsurf/public/SectionIVF-IWSUFacultyManual.pdf (last visited April 6, 2007)

officer's or employee's official control or direction, or in his or her official custody, for the private benefit or gain of the officer, employee, or another." ⁵⁵⁵

The University of Washington receives a very large amount of federal funding. Tech transfer is handled by UW Tech Transfer. In 2006, of 310 disclosed inventions, 153 commercialization agreements were completed, and 151 patent applications were submitted. The University of Washington received 23.5 million dollars in royalty revenue in 2006. The University of Washington Patent Policy allows for the granting of exclusive licenses to private industry partners, though it stresses that research is generally to be done only if it results in publishable results. After deducting administrative and legal costs, the University of Washington shares revenue derived from patents by giving one third to the inventor, one third to the inventor's department or college, and one third to the University's research funds. While University employees are allowed to consult with industry partners, they are specifically advised to avoid conflicts of interest. Conflicts would arise if "the faculty member owns stock in the company, holds a management position in the company, has a continuing role in the scientific program of the company, or also receives research funding from the organization."

C.47.2 Specialized Funding Agency IP Policies

The Washington Apple Commission is a specialized state agency designed to promote the apple industry in Washington State. 563 Amongst its duties, it conducts research into the benefits

⁵⁵⁵ *Id*.

⁵⁵⁶ http://depts.washington.edu/techtran/tt/About_Us/Fast_facts3-4.pdf

⁵⁵⁷ *Id*.

⁵⁵⁸ *Tech Transfer 2006 Annual Report*, at http://depts.washington.edu/techtran/tt/About_Us/Annual_Report/FY2006.pdf (last visited March 19, 2007).

⁵⁵⁹ UW Research Economic Impact, http://www.washington.edu/research/economic.html (last visited April 6, 2007)

⁵⁶⁰ Patent, Invention, and Copyright Policy, at http://www.washington.edu/faculty/facsenate/handbook/04-05-07.html (last visited March 19, 2007).

⁵⁶¹ Technology Transfer 5. Licensing Revenue, http://www.washington.edu/admin/rules/APS/59.04.5.html (last visited April 6, 2007)

⁵⁶² *Id*.

⁵⁶³ West's RCWA 15.24.070

of apples.⁵⁶⁴ Pursuant to such research, the Agency is charged with acquiring IP rights from funded research, and licensing and commercializing said IP as appropriate.⁵⁶⁵

The Life Sciences Discovery Fund is a special fund created via money from the state's tobacco lawsuit settlements. ⁵⁶⁶ Periodic reports are to be made to the state legislature on the return on the state's investment in research, including IP acquired. ⁵⁶⁷

The Washington legislature has established the "Investing in Innovation Grants Program," which is a program established by the Washington Legislature to encourage research and tech transfer in the state. See Its particular focus is the creation and commercialization of IP in the telecommunication, energy, and technology sectors. Its efforts include the Washington Technology Center. The Center is to be become a "world class tech transfer center" via the efforts of the state, universities, and industry.

C.48 West Virginia

C.48.1 University IP Policies

West Virginia University's (WVU) office of Tech Transfer policy is to, generally, take the patent to any technology developed on its campus.⁵⁷¹ The University retains the discretion to transfer patent or other IP rights, including the rights to inventions not yet created, to private actors.⁵⁷² The University provides a \$100 award for each invention disclosure, and shares royalty revenue with the inventor in a 30/10/10/50 split between the inventor/inventor's

⁵⁶⁴ West's RCWA 15.24.070(6)

⁵⁶⁵ West's RCWA 15.24.070 (14)

⁵⁶⁶ West's RCWA 43.350.070

⁵⁶⁷ *Id*.

⁵⁶⁸ West's RCWA 28B.20.283

⁵⁶⁹ *Id*.

⁵⁷⁰ *Id*.

⁵⁷¹ WVU Office of Tech Transfer IV. Patent Policy, at http://www.wvu.edu/~research/techtpatent.html (last visited March 19, 2007).

⁵⁷² *Id*.

department/inventor's college/the University as a whole.⁵⁷³ The University requires that University personnel do not act against the interests of the universities by, for example, "(a) signing of patent agreements with outside persons or organizations which may abrogate the rights of the University, as stated in this Policy or which otherwise conflict with this Policy and (b) using the name of the University or any of its campuses or units without prior authorization, in connection with any invention."⁵⁷⁴

C.48.2 Specialized Funding Agency IP Policies

The entity in West Virginia responsible for attracting new science and technology industries, and expanding existing technology by obtaining research grants, is the West Virginia Development Office.⁵⁷⁵ It also reviews the findings of the Center of Regional Progress, the Center for Economic Research, the Institute for International Trade Development and the West Virginia Foundation for Science and Technology.⁵⁷⁶

The West Virginia Academy of Science and Technology was formed to foster "educational and economic development require an integrated program of support for research and development, assistance in the transfer of technological innovations and discoveries to public and private enterprises and facilitation of the commercialization of intellectual property."⁵⁷⁷ It is to function something like a learned society ⁵⁷⁸, and make periodic reports about the state of IP development in West Virginia. ⁵⁷⁹ Finally, purchases directly related to Research and Development, including the costs associated with investigating, acquiring or purchasing a patent, are exempt from taxation by the State of West Virginia. ⁵⁸⁰

⁵⁷³ *Id*.

⁵⁷⁴ *Id*.

⁵⁷⁵ W. Va. Code, § 18B-13-3

⁵⁷⁶ W. Va. Code, § 18B-13-3(B)

⁵⁷⁷ W. Va. Code, § 5B-2C-1

⁵⁷⁸ W. Va. Code, § 5B-2C-5

⁵⁷⁹ W. Va. Code, § 5B-2C-6

⁵⁸⁰W. Va. Code, § 11-15-9b

C.49 Wisconsin

C.49.1 University IP Policies

The large University of Wisconsin system has a universal patent policy, which mandates disclosure of all inventions made by faculty or staff. ⁵⁸¹ The individual universities within the system are empowered to take the assignment of the rights to a patentable invention themselves, or to a designated nonprofit management organization, such as the UW-Madison Alumni Research Foundation (WARF). 582 WARF has an extensive framework for the disclosure, patenting, and commercialization.⁵⁸³ Once a given disclosure is accepted by WARF, it is assigned to a licensing manager, who shepherds it through the commercialization process.⁵⁸⁴ In addition to this heavily professional process of finding licensees, WARF also has an unusual revenue sharing arrangement. 585 First, 20% of the gross royalty payment is given to the inventor. 586 Then, WARF deducts its operating expenses from a combination of its endowment and its royalty revenue. 587 After deducting its expenses, WARF distributes the rest of the royalty revenue back to the University as part of its Annual Grant.⁵⁸⁸ Of the first \$100,000 generated by each licensed technology, the laboratory of the inventor of that technology is granted an amount equal to 70% of the gross revenue. 589 Then the inventor's department is granted a share equal to 15% percent of the gross revenue. 590 Finally the remainder is gifted to the UW Madison Graduate School.⁵⁹¹

⁵⁸¹ Financial Administration Patent Policy (G34), at http://www.uwsa.edu/fadmin/gapp/gapp34.htm (last visited March 19, 2007).

⁵⁸² *Id*.

⁵⁸³ Disclosing to Warf, http://www.warf.org/inventors/index.jsp?cid=14&scid=8 (last visited April 6, 2007).

⁵⁸⁴ Licensing, http://www.warf.org/inventors/index.jsp?cid=14&scid=8 (last visited April 6, 2007).

⁵⁸⁵ Royalty Distribution, http://www.warf.org/inventors/index.jsp?cid=14&scid=8 (last visited April 6, 2007)

⁵⁸⁶ *Id*.

⁵⁸⁷ *Id*.

⁵⁸⁸ *Id*.

⁵⁸⁹ *Id*.

⁵⁹⁰ *Id*.

⁵⁹¹ *Id*.

WARF also provides resources for faculty and staff seeking to spin out a start up company using technology licensed from WARF.⁵⁹² If a UW Madison inventor deems a technology developed there to be commercially feasible, it is WARF policy to enter a stand-still period of 6 months while the inventor creates a business plan and investigates commercial feasibility.⁵⁹³ During this time, WARF agrees not to license the technology in question to a third party, while the inventor agrees to deliver a completed business plan to WARF.⁵⁹⁴ WARF's Board of Trustees Internal Start Up committee will then consider the business plan, as well as other relevant factors, and determine whether to finalize licensing and any equity agreements with the inventor.⁵⁹⁵ WARF's Board of Trustees is sensitive to the terms of the licensing agreement, especially the "field of use" restrictions on the license.⁵⁹⁶ A subsidiary of WARF is WiSYS, which functions as the Tech Transfer foundation for the universities other than UW Madison.⁵⁹⁷ Recently, WiSYS was given \$1 million dollars from the UW-Madison Alumni Research foundation in order to fund research conducted at the other universities.⁵⁹⁸

C.49.2 Specialized Funding Agency IP Policies

W.S.A. 560.62 permits the Wisconsin Department of Commerce to provide grants to Wisconsin businesses or business/education consortia to help create new, or improve existing, industrial products. The statute conditions the granting of such money on the creation of an explicit agreement as to patent and license ownership, dissemination of information to the public, and the responsibilities of the party conducting the research.⁵⁹⁹ It does not appear on its face to be created so as to provide a proprietary interest for Wisconsin in IP that is generated with the funding.

⁵⁹² Start-ups, http://www.warf.org/inventors/index.jsp?cid=16 (last visited April 6, 2007).

⁵⁹³ Stand-still period, http://www.warf.org/inventors/index.jsp?cid=16 (last visited April 6, 2007).

⁵⁹⁴ *Id*.

⁵⁹⁵ Business Plans, http://www.warf.org/inventors/index.jsp?cid=16 (last visited April 6, 2007).

⁵⁹⁶ Final Agreements, http://www.warf.org/inventors/index.jsp?cid=16 (last visited April 6, 2007).

⁵⁹⁷ About us, at http://www.wisys.org/aboutus/ (last visited March 19, 2007).

⁵⁹⁸ Chris Fleissner and Joe Vanden Plas, *WiSys to distribute \$1 million in research fund*, Wisconsin Technology Network at http://wistechnology.com/article.php?id=3067 (last visited March 19, 2007).

⁵⁹⁹ W.S.A. 560.62

The Wisconsin Aerospace Authority is a state agency established to promote space related commercial, technical, and educational development in the state, including the creation of IP.⁶⁰⁰ It may own, create, and license patents and other IP.⁶⁰¹ It is to develop a business plan in conjunction with the Wisconsin Space Grant Consortium so as to obtain all possible funding sources.⁶⁰² It may also issue bonds⁶⁰³, to be used to create a Spaceport.⁶⁰⁴

C.50 Wyoming

C.50.1 University IP Policies

Wyoming's baccalaureate and graduate degree granting institution is the University of Wyoming. It was established in the Wyoming Constitution in 1880.⁶⁰⁵ Tech Transfer is handled by the University of Wyoming Research Products Center.⁶⁰⁶ The University reserves the right to all inventions made on its property, with the exception of those made on the "personal time" of staff.⁶⁰⁷ The definition of "personal time" excludes any activities done on University premises.⁶⁰⁸ Net revenue from licensed inventions is shared by distributing 60% to the inventor and 20% to the inventor's department, and 20% to the University's research fund.⁶⁰⁹ Prior to signing a consulting agreement that will require the use of University property or disclosure of University IP, a University employee is instructed to notify the research advisory committee and

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<sup>600</sup> W.S.A. 114.60
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⁶⁰¹ W.S.A. 114.62 (10)(d)

⁶⁰² W.S.A. 114.63 (9)

⁶⁰³ W.S.A. 114.70

⁶⁰⁴ W.S.A. 114.77

⁶⁰⁵ Wyo. Const. Act of Admission §8.

⁶⁰⁶ Wyoming Technology Transfer, at http://uwadmnweb.uwyo.edu/rpc/default.asp (last visited March 19, 2007).

⁶⁰⁷ University Regulations 641, Revision 3: Patents and Copyrights (7), at http://uwadmnweb.uwyo.edu/legal/uniregs/ur641.htm (last visited March 19, 2007).

⁶⁰⁸ *Id*.

⁶⁰⁹ *Id*.

obtain a waiver of the University's rights, or otherwise alter the agreement to make it conform with University policy. 610

C.50.2 Specialized Funding Agency IP Policies

The University of Wyoming and the Wyoming Business Council (WBC) have a joint project called the Wyoming Small Business Innovation Research and Technology Transfer Programs (WSSI).⁶¹¹ These programs seemed designed to assist Wyoming businesses with applying for federal grants from specific agencies. They also fund Wyoming businesses through the Phase 0 process prior to Phase 1 application to a federal agency, granting each small business up to \$5,000.⁶¹² According to WSSI, Wyoming residents have received at least \$21 million via the federal programs.⁶¹³ Wyoming does not appear to claim any proprietary rights in any IP so created.

The Wyoming Technology Transfer Center is a program funded by the Federal Highway Administration, in cooperation with the University of Wyoming, the Wyoming Transportation Department, and Wyoming localities. It assists Wyoming state agencies and individuals by, amongst other things, disseminating information about new technology related to transportation, such as road design, construction, and maintenance. 15

⁶¹⁰ University Regulations 641, Revision 3: Patents and Copyrights(11), at http://uwadmnweb.uwyo.edu/legal/uniregs/ur641.htm (last visited April 18, 2007)

⁶¹¹ About, at http://uwadmnweb.uwyo.edu/SBIR/about.html (last visited March 19, 2007).

⁶¹² *Id*.

⁶¹³ *Id*.

⁶¹⁴ WyT²/LTAP Center, http://www.eng.uwyo.edu/wyt2/ (last visited April 18, 2007).

⁶¹⁵ *Id*.