

Intellectual Property Policy Committee Report and Recommendations

Part One: Proposed Intellectual Property Policy
Part Two: Recommendations to the Chancellor

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Status: Out for Review by the University Community

Intellectual Property Committee
CSU OFFICE OF THE CHANCELLOR

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PART ONE: Proposed Intellectual Property Policy

I. INTRODUCTION AND EXECUTIVE SUMMARY

A. Project Concept

In adopting *Access to Excellence* as the strategic plan for the California State University (“CSU” or “University”), the CSU Board of Trustees affirmed long-standing goals of the CSU to create and provide top-quality, higher-education opportunities that help students in California to be successful and well-prepared as future citizens, leaders and workers of the state.¹ In addition, the plan focuses on the major role CSU has to play in shaping the economic, political and social environment of the State of California.² The increasing importance of research and development, and the rapid advancement in technology, is likely to shape expectations for excellence in higher education.

As part of its mission, the CSU aims to promote an academic environment where creative works, innovation and entrepreneurship are encouraged and supported. This mission is guided by well-established academic values and practices, including, among others, academic freedom and with it the privilege to generate and disseminate new knowledge. To that end, the CSU supports the development of policies and procedures that express a sincere commitment to help support the production, dissemination and commercialization of intellectual property by its faculty members, students, employees and affiliates in a fair and equitable manner.

Many CSU faculty are actively involved in research, technology development, creative works and other scholarly activities across a wide spectrum of disciplines that have the potential to generate intellectual property. The CSU’s diverse pool of talented faculty have interest and expertise in applied domains such as agriculture, engineering, water systems, biotechnology, coastal and marine sciences, energy efficiency, alternative energy, transportation, human factors in technology design and health and education. Increasingly, the CSU is being engaged in the translation of new knowledge generated by research for commercial purposes through technology transfer. Annually, the CSU has nearly \$0.6 billion in sponsored project expenditures and a survey of the total holding in grant and contract equity in the Science Technology Engineering and Mathematics (STEM) related areas conducted in April 2015 totaled over \$0.5 billion in multi-year funding, involving nearly 4000 faculty researchers and tens of thousands of students.

The CSU has long recognized that engagement of students in research and other scholarly activities is a powerful tool for achieving student success: positively affecting analytic and critical thinking, increasing academic achievement and retention, clarifying choice of academic major, developing important teamwork and soft skills and promoting enrollment in graduate school admissions. Research experiences also provide the necessary skills to translate theoretical information into practical knowledge, allowing students to compete successfully for jobs and opportunities and participate effectively in the workforce after graduation. Student researchers, therefore, have the potential to conceive and generate intellectual property with commercial value and their rights and privileges must also be recognized and considered.

¹ See *Access to Excellence Accountability Plan* available at <http://www.calstate.edu/accesstoexcellence/executive-summary.shtml>.

² *Id.*

CSU's excellence in teaching and learning is achieved in part with the creative production of educational materials by our faculty, staff and students. Recognizing, protecting and sustaining the intellectual property created through our teaching and learning processes requires comprehensive copyright and licensing policies that faculty, staff and students understand and support. The institutional services to enable the consistent and timely application of copyright and licensing policies must be part of CSU's intellectual property strategy and should include easy access to information, professional development and consultation services.

Currently, CSU lacks any centralized policy or system to adequately support research, technology development and other creative endeavors among its faculty, staff and students. Recent efforts to promote student success and to encourage faculty entrepreneurship have highlighted the challenges faced by those interested in developing intellectual property. The legal and interpretive issues surrounding such policies can be very complex. Specifically, the wide disparity of intellectual property policies across those CSU campuses that have policies, and the absence of any policy on others, makes it difficult to provide consistent, accurate and relevant systemwide advice to the campuses when questions on intellectual property matters arise. Further, CSU's decentralized approach to addressing intellectual property issues often fails to provide the necessary structure and support to those engaged in research and development, particularly when issues of protection and technology transfer arise.

The IP Committee has been asked to evaluate the many challenges campuses face involving intellectual property, and to provide a draft IP Policy document. This report attempts to provide an overview of the various intellectual property challenges facing the system along with draft policies and a series of other recommendations for consideration by the CSU community. To date, the draft IP Committee Report and Recommendations has been reviewed by the Chancellor, Executive Vice Chancellors, Vice Chancellors and campus Presidents. The next step in the review process is for the draft report, including its recommendations and draft policies, to be reviewed by Provosts, Vice Provosts, the Academic Senate, and Chief Research Officers at each of the campuses. After their input has been received, the draft policies will be subject to collective bargaining.

B. Acknowledgements to Contributors and Authors

Members of the IP Committee were drawn from the ranks of Chancellor's Office Business and Finance, Human Resources and Academic Affairs administrators, the Office of the General Counsel, campus-based Academic Affairs administrators and Research Auxiliary administrators, systemwide Affinity Group leaders and experts in fields such as advancement and technology transfer. The members of the IP Committee were chosen to ensure that the proposed recommendations receive input from multiple viewpoints, including from individuals with substantial knowledge and expertise in technology transfer and intellectual property matters, as well as those who work directly with faculty, staff and students and could therefore identify many of the problems and concerns these demographics face when participating in research.

This document capitalizes on the expertise of the members of the IP Committee as well as the experiences of those CSU campuses that have well-developed intellectual property and technology transfer capabilities. This plan also builds on the recommendations of the 2008 Joint Task Force on Patents and Technology Transfer and the 2011 report issued by the CSU Technology Transfer Implementation Task Force suggesting a more consistent approach on intellectual property protection and technology transfer.

II. BACKGROUND INFORMATION

Name	Title	Location
Jennifer Glad <i>(Co-Chair)</i>	University Counsel	Chancellor's Office
Zed Mason <i>(Co-Chair)</i>	Interim AVC for Research Initiatives & Partnerships	Chancellor's Office
Bradford Anderson	Interim VP for Research & Economic Development	San Luis Obispo
Susan Baxter	Executive Director, CSU Program for Education & Research in Biotechnology (CSUPERB)	San Diego
Sue DeRosa	Director of Sponsored Programs	Chancellor's Office
David Dowell	Provost	Long Beach
Andrea Gunn-Eaton	University Counsel/Business & Finance Team Leader	Chancellor's Office
Gerry Hanley	AVC for Academic Technology Services	Chancellor's Office
Denice Helwig	Chief of Staff	Humboldt
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Margaret Merryfield	AVC for Academic Human Resources	Chancellor's Office
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John Swarbrick	AVC for Labor Relations	Chancellor's Office
Marie Talnack	Director, Technology Transfer Office and Industry Clinic	Pomona
Shawna Young	Interim Director of Research & Sponsored Programs	Stanislaus

A. History of Intellectual Property Policies and Commercialization

Executive Order 644, issued September 7, 1995, which is the current systemwide policy on intellectual property, merely requires campuses to update their intellectual property policies. Of the 23 CSU campuses, 16 have some form of intellectual property policy, whether they pertain to copyright, patent or both. These policies vary from campus to campus, depending on whether the person who creates the intellectual property is faculty, staff or a student.³ For many campuses, the overarching theme is to grant ownership of any intellectual property rights (copyright and/or patent) to the author or inventor of the intellectual property, rather than the CSU. This is often the case, irrespective of the level of support or resources CSU provides in the development of the intellectual property. For example, some campuses have copyright policies that state the author owns the intellectual property, regardless of the amount of support or resources provided by the CSU that contributed to the creation of the intellectual property. In contrast, other campuses have patent policies that claim CSU ownership of the intellectual

³ In 2003, an Academic Senate Guideline was published entitled "Intellectual Property, Fair Use and the Bundling of Ownership Rights," which many current campus policies borrow from. That report provides guidelines related to copyrights, but not on patent rights.

property, rather than the inventor, depending on the level of support the CSU provides. The wide disparities in intellectual property policies on CSU campuses, as well as the complete absence of a policy in some cases, makes it difficult to provide accurate and relevant systemwide advice to the campuses with questions on intellectual property issues. Further, the policies as they currently exist often fail to provide the necessary support and structure to provide guidance and assistance to those seeking to develop intellectual property, particularly if it might be commercialized.

CSU patents have focused, as have federal research and development expenditures, on the life and physical sciences, information technology and engineering. CSU recorded more than \$260M in STEM research expenditures for fiscal year 2013/14, suggesting significant potential in patenting and licensing. Over the last year, across the CSU approximately 23 patent applications were filed and prosecuted with the United States Patent Office, the majority originating from San Diego State University.⁴

B. Benefits to CSU

CSU can leverage its academic products to transfer its creations and inventions, many of which grow out of the culture of sponsored research, to partners beyond the University. Called technology transfer (“tech transfer”), the enterprise is broader than the name implies. It consists of the sharing and/or commercialization of university-developed skills, inventions, methods, products and knowledge. Tech transfer requires procedures, metrics and outcomes so that institutions can judge whether the appropriate release is informal sharing, provides for protection for eventual commercialization or promotes immediate creation of a new business.

CSU’s growing research agenda complements its educational mission in that, over the last few years, there has been an increased emphasis in engaging students, and in particular minority undergraduate students, in authentic research experiences. Promoted largely through federal funding provided by undergraduate research training grants from the NSF and NIH aimed at increasing student retention and graduation, several campuses lead the nation in placing such students in STEM-related and social science graduate programs. However, the long-term success in institutionalizing undergraduate research programs and promoting the “teacher-scholar model” depends on the CSU’s ability to manage the increasing volume and complexity of research, tech transfer and partnerships in a way that not only promotes undergraduate and graduate student involvement, but also provides solutions for government agencies as well as business and industry partners.

C. Federal Compliance Requirements (Bayh-Dole Act)

In 1980, the Bayh-Dole Act was signed into law, allowing universities to patent federally-funded inventions and to retain the royalties. The Bayh-Dole Act mandates that institutions in receipt of federal grants and contracts provide ways to protect and, if appropriate, commercialize the results. As the CSU’s portfolio of grants and contracts increases, its risk of non-compliance increases. Federal expenditures represent nearly 70% of the CSU’s externally-funded grant and contract expenditures each year. Indeed, the majority of inventions in the CSU are at least partially supported with federal funds. Expanding CSU’s tech transfer capacity is consistent with its obligations under the Bayh-Dole Act to protect and commercialize intellectual property, where appropriate. For this reason, we recommend

⁴ Campuses reported that in 2015, 41 provisional patent applications were filed (essentially place holder applications) and 23 patent applications were prosecuted with the United States Patent and Trademark Office.

the adoption of the obligations required under the Bayh-Dole Act as a reasonable set of objectives for the CSU to apply to all inventions whether or not they are federally funded. (See [Bayh-Dole Act Obligations](#) in Section IV.A).

D. Challenges and Constraints

Adjusting for size and mission, CSU campuses are mid-range performers in research and development. The one exception is San Diego State University, which is regularly ranked by the National Science Foundation (NSF) among the top 150 universities for nonmedical/hospital research and development. With a total R&D yearly expenditure rate of \$92M (5-year average), of which approximately \$75M is STEM related, its research activity far exceeds its closest rivals, San Francisco State University, San Jose State University, and Cal Poly San Luis Obispo, which generate between \$15M and \$35M in STEM R&D expenditures annually.⁵ (See [Appendix 1](#) for CSU External and R&D Expenditure analysis).

In the CSU, development of research space has been limited by a funding model that primarily supports instructional space. However, significant research, development and tech transfer in the sciences and engineering depend on physical facilities, human capacity and technological complexity. Indeed, there appears to be a strong correlation between research space and tech transfer support on a campus and its intellectual property portfolio; suggesting that on many campuses the investment in research infrastructure has been a rate-limiting step in developing intellectual property, particularly in the experimental and laboratory-intensive disciplines.

Moreover, business, social science and education awards—a significant fraction of CSU-sponsored projects—have low indirect cost return to support infrastructure, and in other university systems have had a disappointing impact on tech transfer. However, this extensive portfolio, particularly in the research and development for educational initiatives designed to improve teaching and learning, may prove a CSU strength. For example, San Diego State University’s two top royalty-bearing licenses are both for software and materials protected by copyright only. Neither was developed by faculty in the life sciences or engineering. Some refer to this area as “non-traditional tech transfer” (with traditional tech transfer being licensing of patent rights on STEM-related inventions) and it has been a large area of recent growth. The indirect cost rates on these projects are historically low and the costs associated with copyright and licensing for such projects are not as significant as those for patent prosecution.

III. RECOMMENDATION

A. Recommendation: Adopt Systemwide Intellectual Property Policies

The IP Committee recommends adopting two systemwide policies—a Patent Policy and a Copyright Policy—to replace all existing campus policies. These policies would apply to both campuses and auxiliary organizations. This recommendation has multiple aims: to encourage and recognize research, innovation and creative works by members of the CSU community; to clarify ownership of intellectual property rights; to define the ownership rights, distribution and commercialization associated with the products of research, authorship and invention by the CSU community; to create opportunities for public use of CSU innovations maximizing public benefit to our local communities and the State of

⁵ See NSF HERD (Higher Education Research & Development Survey) <http://www.nsf.gov/statistics/srvyherd/>. CSU data analyzed and presented in [Appendix 1](#) to this report.

California; to provide for the equitable sharing of revenue with the creators of intellectual property; and to define the policies and procedures for managing such products. The IP Committee has developed proposed copyright and patent policies, which are incorporated in this report.

1. Purpose of the Systemwide Policies

As demonstrated in this report, the CSU is in need of systemwide guidance related to intellectual property. The goals of the proposed systemwide policies include:

- Supporting research, innovation and scholarly and creative activities, leading to potential copyrightable works, inventions and patents;
- Supporting and protecting author/inventor rights to their intellectual property, allowing them to use their intellectual property to further their research, scholarly or educational goals and objectives;
- Supporting student participation in research, scholarly and creative activities, contributing to student success and increasing graduation rates; and
- Providing systemwide policies that are compliant with the Bayh-Dole Act and the Collective Bargaining Agreement (CBA) with the California Faculty Association (CFA) – such that all CSU campuses and auxiliaries, irrespective of size and resource availability, will be able to effectively implement the policies (with system-office support when needed).

Updated systemwide policies are essential to the implementation of this report. The recommendation supports the CSU mission, “*Access to Excellence*,” notably Commitment 2 (*Plan for Faculty Turnover and Invest in Faculty Excellence*) and, most importantly, Commitment 6 (*Enhance Student Opportunities for “Active Learning”*). The two commitments call for an increased focus and investment in faculty research and engaging students in faculty-mentored research activities. With an increased focus on student research participation to improve graduation rates, a general increase in externally funded research is likely to follow. As the volume increases, so does the need for enhanced systemwide policies to support research activities across the CSU.

2. Explanation of Changes From Prior System/Policies

The proposed policies provide needed clarification regarding the assignment of ownership of intellectual property. The policies aim to outline when the University (or auxiliary) owns the intellectual property rights or when copyright/patent ownership belongs to the author or inventor (faculty, staff or students). Under the proposed copyright policy, in many instances the author owns the intellectual property. In the case of the proposed patent policy, ownership generally rests with the University or auxiliary when the inventions are created within the course and scope of employment or with CSU resources. Both policies, however, require assignment of the University’s or auxiliary’s rights to the author/inventor when the mission and best interests of the CSU are better served by such action. Where the University’s or auxiliary’s rights are assigned to the author or inventor of the intellectual property, the University or auxiliary would typically retain a royalty-free license to use the intellectual property for research and educational purposes.

The proposed copyright and patent policies also include royalty sharing provisions for cases where the University or auxiliary retains ownership of the intellectual property. In such cases, the policies require an equitable sharing of royalties with the author/inventor and the inventor's campus or associated auxiliary. Additionally, where the royalties received by the campus or auxiliary providing tech transfer services exceed the operating costs of providing such services in any fiscal year, the proposed policies require that the campus or auxiliary pay 5% of net licensing revenues in excess of the operating costs to the CSU to be used in the CSU's systemwide efforts to support research and innovative endeavors, as detailed in this report.

3. Need For Labor Negotiations

The current Collective Bargaining Agreement with CFA, which runs until June 30, 2017, contains an Article on Intellectual Property Rights (Article 39). Article 39 does not contain provisions regarding the ownership of intellectual property rights. Instead, it essentially recognizes that, to the extent faculty have previously used materials created by them for non-CSU purposes, faculty retain that right. It further recognizes that the provision does not apply to materials created by faculty with extraordinary University support.

In the event that CFA does not agree to supersede Article 39 with the proposed systemwide policies outside of successor bargaining, the issue would need to be incorporated into the next round of full contract negotiations. The successor negotiations will commence following service of a written notice that is to be delivered no later than November 30, 2016. Based on the previous history of the parties, we expect the Board of Trustees to authorize the parties to begin successor negotiations at the November, 2016 Board of Trustees meeting. Given the fact that the contract is almost certain to be open within 12 months of the date of this report, the most realistic way of negotiating and implementing the recommendations of this report would be through the successor contract negotiations process.

IV. PROPOSED CSU INTELLECTUAL PROPERTY POLICY

A. Bayh-Dole Act

Obligations of Universities and Other Nonprofit Organizations: By accepting federal funds in support of a research project, institutions assume responsibility for complying with the requirements of the Bayh-Dole Act. In general, the nonprofit institutions are required to:

1. obtain written agreements from all employees (except clerical and non-technical personnel) recognizing their obligations to report inventions developed under federally-funded programs to the appropriate university office and assign them to the institution;
2. disclose an invention to the federal agency supporting the applicable research program within two months after the inventor discloses an invention in writing to the institution;
3. elect title to the invention within two years after disclosing the invention to the federal agency but no later than 60 days before the end of any statutory period in which valid patent protection can be obtained in the U.S.;
4. file a patent application within one year after election of title, but no later than the end of any statutory period in which valid patent protection can be obtained in the U.S.;

5. include at the beginning of the U.S. patent application and patent a statement that the U.S. Government has rights in the invention and identifying the sponsoring agency and the number of the funding award;
6. submit to the funding agency a confirmatory license for each U.S. patent application;
7. notify the funding agency within 10 months after filing the initial patent application whether and in which countries corresponding foreign applications will be filed;
8. submit periodic reports, no more frequently than once a year, regarding the utilization of the invention as requested by the funding agency;
9. notify the funding agency at least 30 days before statutory deadlines if a patent application or patent will be abandoned;
10. give preference to issuing licenses to small business firms if they show they have the resources and capability to bring the invention to practical application;
11. except with permission of the funding agency, not assign rights to inventions to third parties (except to patent management firms), including to the inventor;
12. require any exclusive licensee to substantially manufacture in the U.S. any products that will be sold in the U.S., unless this requirement is waived by the funding agency;
13. share with the inventor(s) of the invention a portion of any income the institution receives from the licensing of the invention;
14. use the balance of income received from the licensing of the invention (after costs associated with patenting and licensing are reimbursed) to support education and scientific research.

B. Proposed Copyright Policy

1. Policy Objective

The creation of copyrighted works is one of the ways the CSU fulfills its academic mission of contributing the body of knowledge of its students, faculty and staff for the public good. Benefits for students, faculty, the CSU and the public derive from the ongoing development and dissemination of intellectual properties in the CSU. The CSU encourages the creation of original works of authorship and the free expression and exchange of ideas for the professional development of its faculty and staff, and most importantly for the persistence, academic and career success of its students.

United States Copyright Office *Circular 09* states:

Section 101 of the [Copyright Act](#) (Title 17 of the U.S. Code) defines a “work made for hire” in two parts: (a) a work prepared by an employee within the scope of his or her employment, or (b) a work specially ordered or commissioned for use. If a work is made for hire, an employer is considered the author even if an employee actually created the work. The employer can be a firm, an organization, or an individual.⁶

⁶ United States Copy Right Office, Circular 09 Work Made For Hire Under the 1976 Copyright Act, <http://copyright.gov/circs/> accessed June 17, 2015

2. Policy Statement

This policy establishes [University](#) and auxiliary ownership rights and release of ownership rights of copyrightable works based on types of work, whether the work was created using [CSU Resources](#) and any obligations of the University, auxiliary or [Author](#) pursuant to grants, contracts or other agreements with third parties. The CSU and campus auxiliaries aim to allocate intellectual property rights so as to optimally support the mutual interests of the CSU, faculty, staff and students. The ownership interest of the University, auxiliary and Author may be limited by sponsorship arrangements under which a third party furnished some or all of the resources that supported the work.

This policy is intended to enhance Article 39, Intellectual Property Rights, of the Unit 3 Collective Bargaining Agreement. Where there are conflicts between this policy and Article 39, Article 39 takes precedence. Copyrightable works that are also patentable shall also be subject to the CSU Patent Policy.

3. Types of Copyrightable [Works](#) and [Assignment](#) of Rights

Scholarly/Aesthetic Work:

A scholarly/aesthetic work is a work originated by a [Designated Academic Appointee](#) resulting from [Independent Academic Effort](#) (e.g., books, articles, photographs, drawings, etc.). Subject to other sections of this policy, ownership of copyrights to scholarly/aesthetic works resides with the Author, unless the Author previously agreed otherwise by separate individual agreement.

Personal Work:

A personal work is a work that is prepared outside the employee's [Scope of Employment](#) and without the use of CSU Resources. Ownership of copyrights in personal works resides with the Author.

Student Work:

A student work is a work produced by a registered student that is produced outside any CSU employment and is not a sponsored, contracted or commissioned work. Ownership of copyrights to student works resides with the Author. For jointly-created works between students or students and faculty refer to Section 2 of this policy.

CSU Course Materials:

CSU course materials include [Course Approval Documents](#) and [Course Instructional Materials](#). CSU Course Approval Documents include syllabi, course numbers, catalog descriptions, student learning outcomes and course outlines for CSU courses. Ownership of Course Approval Documents developed without [CSU Extraordinary Support](#), including copyright, resides with the Author. However, in all cases CSU (and the auxiliary as appropriate) retains a free-of-cost, perpetual and nonexclusive worldwide license to use the Course Approval Documents for research and educational purposes, including without limitation the right to reproduce, prepare derivative works, distribute and display the Course Approval Documents.

CSU Course Instructional Materials include documents, digital products or other materials developed for instruction of CSU courses. Ownership of Course Instructional Materials developed without CSU Extraordinary Support, including copyright, resides with the Author. In all cases, however, CSU (and the

auxiliary as appropriate) retains a free-of-cost, perpetual and nonexclusive worldwide license to use the Course Instructional Materials for research and educational purposes, including without limitation the right to reproduce, prepare derivative works, distribute, perform and display the Course Instructional Materials.

Ownership of CSU course materials (including Course Approval Documents and Course Instructional Materials) created with [CSU Extraordinary Support](#), including copyright, resides with the University. The University may provide a free-of-cost, perpetual and nonexclusive worldwide license to the Author to use the course materials for educational and research purposes.

Externally Sponsored Work:

A sponsored work is a work first produced by or through a CSU campus in the performance of a written agreement between the campus and an external sponsor. Ownership of copyrights to sponsored works resides with the University unless the sponsored agreement states otherwise.

CSU Commissioned Work:

A commissioned work is a work produced for CSU purposes by individuals not employed by CSU or an auxiliary, or by CSU employees either with CSU Extraordinary Support or outside their Scope of Employment. When CSU or an auxiliary commissions a scholarly/aesthetic work or CSU course materials, in the absence of a specific written agreement assigning ownership between the CSU (or auxiliary) and the Author(s), rights are as assigned in those respective sections of this policy. When CSU or an auxiliary commissions the production of another type of work, copyright ownership is specified in a written agreement and title normally resides with the University or auxiliary, as appropriate. Any such agreement that provides for ownership by other than CSU must also provide the CSU with a free-of-cost, perpetual and nonexclusive, worldwide license to use and reproduce the copyrighted work for research and educational purposes, including without limitation the right to reproduce, prepare derivative works, distribute, perform and display the work.

Institutional Work:

Except as otherwise provided in this policy, CSU owns all copyrights to works made by CSU employees in their Scope of Employment and owns all copyrights to works made with the use of CSU Resources.

4. Copyright Ownership of Jointly Originated Works

Campuses (and auxiliaries where appropriate) establish a process for determining Copyright ownership of jointly originated works by separately assessing the category of work and contribution of each author, including faculty, students and staff of that campus. Rights between joint owners of a copyright will be determined pursuant to copyright law.

5. Release of Rights

Campuses (and auxiliaries where appropriate) establish fair processes for determining when release of ownership rights may be appropriate.

Subject to restrictions arising from overriding obligations of the University or auxiliary pursuant to grants, contracts or other agreements with third parties, the University or auxiliary may release its ownership rights in copyrighted works to the Author(s), as determined by the Author's campus or

campus auxiliary, when the best interests and educational mission of the CSU would be better served by such action. Such release of ownership rights are contingent upon the agreement of the Author(s) that no further effort on, or development of, the work will be made using CSU Resources and that CSU (and auxiliary where the auxiliary is the funding party) is granted a free-of-cost, perpetual and nonexclusive, worldwide license to use the work for research and educational purposes, including without limitation the right to reproduce, prepare derivative works, distribute, perform and display the work (the president or designee may make reasonable exceptions to this requirement).

6. Licensing

The CIPO is responsible for the management of copyrights, including assignment and licenses. Refer to Guidelines for more information.

7. Royalties

Campuses and auxiliaries establish a process for sharing of royalties or income from University and auxiliary-owned copyrighted works within the parameters set forth in this policy. Subject to restrictions arising from overriding obligations of the University or auxiliary pursuant to gifts, grants, contracts or other agreements with outside organizations, campuses and/or auxiliaries shall pay annually to the named Author(s), or the Author(s) heirs, successors or assigns, net royalties from the copyrighted work ranging between 25% and 50%, as determined by the Author's campus or campus auxiliary. Revenue sharing should be equitable and take into consideration the proportion of the Author's contribution, CSU costs, any provisions imposed by sponsors or other funding sources and any other applicable agreements concerning the copyright. CSU costs may include campus, auxiliary or Chancellor's Office expenditures (direct or indirect) related to management and licensing of copyrighted works, among others.

In the event that the share of net licensing income (generated by intellectual property covered by this Copyright Policy and the Patent Policy) distributed to any Campus or associated auxiliary providing tech transfer services exceeds the operating costs of such services in any fiscal year, such Campus or auxiliary pay to the CSU for that fiscal year 5% of the net licensing revenues and income received by the Campus or auxiliary in excess of the operating costs of its tech transfer services. All licensing income paid to the CSU is used in CSU's systemwide efforts to support research and innovative endeavors resulting in intellectual property, including without limitation providing assistance with tech transfer and licensing efforts, protection and enforcement of intellectual property rights and providing support and training to CSU faculty, staff and students on intellectual property issues.

8. Definitions

Assign/Assignment: Transfer of copyright ownership rights from one person/entity (the "assignor") to another (the "assignee").

Author(s): One who produces a work by his or her own intellectual labor, including CSU faculty, students and staff. When there is more than one author, the ownership of each author's contribution is considered separately pursuant to this Policy.

Copyright: The intangible property right granted by Federal statute for an original work fixed in a tangible form of expression. Copyright provides the owner with the following exclusive rights in a work:

to reproduce, to prepare derivative works, to distribute by sale or otherwise, to perform publicly and to display publicly.

Course Approval Documents: Include, but may not be limited to syllabi, course numbers, catalog descriptions, course outlines and student learning outcomes.

Course Instructional Materials: Include, but may not be limited to documents, digital products or other materials developed for instruction of CSU courses.

CSU (or University): The Trustees of the California State University or California State University System, which includes all 23 individual campuses within the California State University System. For purposes of this Policy, the term CSU (or University) also includes associated CSU campus auxiliary organizations where the auxiliary organization is the entity responsible for management of copyrights and licensing of intellectual property or is assigned the rights to the copyrighted works for the benefit of the CSU.

CSU Extraordinary Support: Support provided by the CSU, a campus or an auxiliary for work beyond regular CSU assignments may include, but not be limited to, funding for additional employment, assigned time and other forms of payment, additional operating expenses or additional equipment or facilities costs.

CSU Resources: Any combination of the following constitute support in the form of resources by the CSU:

- CSU, campus or auxiliary funds, regardless of source, that are administered under the control, responsibility or authority of the CSU or auxiliary;
- Staff, including student assistants, support staff, administrative support, etc.; or
- Use of facilities, including buildings, equipment or any other facility or asset under the control of the CSU or a campus auxiliary.

Designated Academic Appointee(s): Employees who have a general obligation to produce scholarly/aesthetic works as part of the scope of their employment. Included are all employees with an academic or instructional faculty appointment or employees otherwise designated by the president or president's designee as having the obligation to produce scholarly/aesthetic works.

Independent Academic Effort: Inquiry, investigation or research carried out by designated academic appointees to advance knowledge or the arts where the specific choice, content, course and direction of the effort is determined by the designated academic appointee without direct assignment or supervision by the CSU. The general obligation of designated academic appointees to produce scholarly/aesthetic works as part of the scope of their employment is considered independent academic effort.

Permissible Consulting Activities: Professional or scholarly services provided by CSU employees for outside compensation, which do not interfere with regular CSU duties, do not utilize CSU resources and are not prohibited by terms of the CSU employment contract or other applicable CSU agreements or policies.

Scope of Employment: Any work the employee is expected to perform as part of the employee's assigned duties, including work that contributes to the employee's tenure, promotion or professional development and/or work performed with the use of CSU Resources or under an externally-sponsored

agreement. Excludes work performed outside of the employee's CSU appointment and not performed with the use of CSU Resources (see [Permissible Consulting Activities](#)).

Work(s): Any copyrightable expression including, but not limited to, literary works; musical works including any accompanying words; dramatic works, including any accompanying music; pantomimes and choreographic works; pictorial, graphic and sculptural works; motion pictures and other audiovisual works; sound recordings; architectural works; and computer software.

C. Proposed Patent Policy

1. Policy Objective

The California State University (CSU) fosters innovation and encourages faculty, staff and students to translate results from their research, scholarly and creative activities for public benefit. In addition to the public benefit, these activities directly support the CSU's mission to educate students. Participation in research projects, scholarly work and creative activities has been proven to contribute to student academic and career success and increased graduation rates.

2. Policy Statement

Patents provide a means to encourage the development and utilization of inventions. In administering rights to inventions and patents for the public benefit where the CSU or an auxiliary retains an interest in an invention, the CSU and auxiliaries aim to encourage and assist members of the faculty, students and staff in the use of the patent system. The CSU and auxiliaries determine ownership of patentable inventions in a manner that is equitable to all parties involved. The aim of promoting the progress of research by using the benefits of the patent system is consistent with the purposes for which it was established by Article I, Section 8, of the Constitution of the United States.

This policy is guided by Federal law and ethics, which require the disclosure of inventions achieved with federal grants. For instance, the Bayh-Dole Act requires universities to report inventions resulting from federally funded projects (see [Regulations](#) for complete list). The law also mandates that institutions have procedures for commercialization of disclosed inventions since economic development is a public good.

The president designates a Campus Intellectual Property Officer (CIPO) as the authorized campus representative who is responsible for the management of inventions and patents, including, but not limited to, assignment and licensing as decided or recommended by the Campus IP Committee. It is the responsibility of the designated CIPO, under direction of the president, to establish and maintain procedures that achieve the following objectives:

- Provide appropriate encouragement and education to create a culture for research, creativity, innovation and entrepreneurship by faculty, staff, students and others associated with the CSU;
- Establish and maintain a Campus IP Committee, as needed, to advise on matters related to inventions and patents;
- Establish guidelines, processes and practices for determining the interests of the University, auxiliary, [Inventors](#) and Sponsors in regard to inventions;
- Develop processes to determine and pursue the best use of the invention for the public good and/or to support the mission of the University; and
- Safeguard the interests of the University, auxiliary, Inventor and Sponsor.

3. Invention Disclosure

Campuses and auxiliaries maintain a process for management and review of invention disclosures and make recommendations regarding the best use of disclosed inventions.

Inventors promptly and fully disclose to the Inventor's campus (and auxiliary where appropriate) all inventions conceived of, improved upon or reduced to practice while employed by the CSU. Inventors execute such declarations, assignments or other documents as may be necessary to assure that title to certain inventions are held by the University (or auxiliary where appropriate) or other designated parties in compliance with this policy. If the research/invention is supported by federal funds, the Inventor's campus (or auxiliary where appropriate) disclose the invention to the federal agency supporting the applicable research program within two months after the Inventor discloses the invention in writing to the campus or auxiliary.

4. Multiple Inventors

Invention disclosures list all Inventors – faculty, students and others. Campuses and auxiliaries should establish a process for determining each inventor's contribution to the invention and for ensuring equitable royalty sharing among the inventors prior to filing a patent application, consistent with the parameters for royalty sharing set forth within this policy.

5. Rights to Inventions and Patents

An agreement to [assign](#) inventions and patents to the University (or auxiliary where campus policy requires assignment of such rights to the campus auxiliary), except those resulting from permissible consulting activities without the use of CSU Resources, is mandatory for all employees, for persons not employed by the CSU but who use CSU Resources and for those who receive grant or contract funds through the CSU. Such an agreement may be in the form of an acknowledgment of obligation to assign.

Inventors assign invention and/or patent rights to the University (or auxiliary where campus policy requires assignment of such rights to the campus auxiliary) for inventions first conceived or reduced to practice under any of the following circumstances:

- within their [Scope of Employment](#);
- with the use of [CSU Resources](#);
- under an externally funded agreement awarded to the CSU or auxiliary; or
- under an appropriately authorized 3rd party agreement (for non-funded agreements).

The CSU or auxiliary may return rights to the Inventor when the best interests and mission of the CSU are better served by such action, as long as there is no further use of CSU Resources and no overriding obligations to third parties, including outside sponsors of research.

There is no joint ownership between the University and auxiliary and the Inventor. Rights to inventions or patents resulting from collaborative research of multiple Inventors from different entities are addressed among the parties in a separate written agreement.

Assignment does not apply to any invention that qualifies fully under the provisions of the California Labor Code Section 2870, which states, "*(a) Any provision in an employment agreement which provides that an employee shall assign, or offer to assign, any of his or her rights in an invention to his or her employer shall not apply to an invention that the employee developed entirely on his or her own time without using the employer's equipment, supplies, facilities, or trade secret information except for those inventions that either: (1) Relate at the time of conception or reduction to practice of the invention to the*

employer's business, or actual or demonstrably anticipated research or development of the employer; or (2) Result from any work performed by the employee for the employer. (b) To the extent a provision in an employment agreement purports to require an employee to assign an invention otherwise excluded from being required to be assigned under subdivision (a), the provision is against the public policy of this state and is unenforceable."

6. Patent Protection & Trade Secrets

Patent Protection: The Inventor's campus (or auxiliary where appropriate) is responsible for receiving and managing invention disclosures. Campuses and auxiliaries establish and maintain a process for determining within 90 days of invention disclosure: (1) whether disclosed inventions are rightfully owned by the University or auxiliary; (2) whether the University or auxiliary release or retain rights in disclosed inventions; and (3) when/whether the University or auxiliary seek patent protection.

Trade Secrets: Certain inventions or technologies may be licensable to industry as trade secrets. When kept secret, a trade secret gives its owner a competitive advantage over those who do not have access to the secret. In order to protect a trade secret, it is necessary for those having access to the trade secret to be bound by a contractual agreement preventing them from disclosing it. Use of trade secret protection should be approved by the University but should be used sparingly and cautiously. However, if public disclosure will inhibit a company's willingness to invest the necessary funds for product development and commercialization, the University or auxiliary, in consultation with the disclosing employee, may license the subject invention as a trade secret. Inventions falling within this category are subject to the Royalties section of this policy.

7. Royalties

Campuses and auxiliaries determine equitable distribution of income/royalties resulting from inventions within the parameters set forth in this policy. Subject to restrictions arising from overriding obligations of the University or auxiliary pursuant to gifts, grants, contracts or other agreements with outside organizations, campuses and/or auxiliaries, depending on which entity owns the intellectual property rights, pay annually to the named Inventor(s), or the Inventor(s) heirs, successors or assigns net royalties from the patented invention ranging between 25% and 50%, as determined by the Inventor's campus or auxiliary (where appropriate). Distribution takes into consideration the proportion of the Inventor's contribution, CSU costs, any provisions imposed by sponsors or other funding sources and any other applicable agreements concerning the invention. CSU costs may include campus, auxiliary or Chancellor's Office expenditures (direct or indirect) related to patent management from invention disclosure through licensing, including patent prosecution, maintenance and tech transfer administration, among others. When appropriate, income distribution must be in compliance with the [Bayh-Dole Act](#).

In the event that the share of net licensing income (generated by intellectual property covered by this Patent Policy and the Copyright Policy) received by any Campus or associated auxiliary providing tech transfer services exceeds the operating costs of such services in any fiscal year, such Campus or auxiliary pays to the CSU for that fiscal year 5% of the net licensing revenues and income received by the Campus or auxiliary in excess of the operating costs of its tech transfer services. All licensing income paid to the CSU is used in CSU's systemwide efforts to support research and innovative endeavors resulting in intellectual property, including without limitation providing assistance with tech transfer and licensing efforts, protection and enforcement of intellectual property rights, and providing support and training to CSU faculty, staff and students on intellectual property issues.

8. Student Inventions

Students assign invention and/or patent rights to the University (or auxiliary where campus policy requires assignment of such rights to the campus auxiliary) for inventions first conceived or reduced to practice under any of the following circumstances:

- collaborating on research projects with CSU faculty members (including faculty-supervised graduate thesis or dissertation work);
- as a student or research assistant employed by or commissioned by the CSU or auxiliary; or
- under an externally funded agreement awarded to the CSU or auxiliary.

Except for those situations identified above, any invention conceived or first reduced to practice by a student at the CSU during the normal course of their education (including homework assignments, laboratory experiments, and special and independent study projects) is owned by the student. The University does not claim ownership of such inventions.

Situations may occur where students are presented with the opportunity to participate in projects or activities in which the ownership of any resulting inventions must be assigned either to the University or auxiliary, or to a sponsoring entity (such as a company), as a condition of the student's participation. Students are never required to participate in projects or activities that relinquish the student's rights to the invention to the University, auxiliary or another entity. In situations where participation is required for course completion but the student is not prepared to waive their rights, the University must provide an alternative that allows the student to retain rights to their inventions.

9. Reporting

Campuses will report the following information to the Chancellor's Office annually (by September 30th of each fiscal year):

- number of Invention Disclosures received;
- new patent applications filed;
- new licenses and options executed;
- gross license income received;
- licenses/options yielding income;
- legal fees expended;
- legal fees reimbursed;
- U.S. patents issued;
- total cost of campus or auxiliary provided tech transfer services; and
- net license income supporting campus or auxiliary provided tech transfer services.

Information reported will be used to inform the Chancellor and Board of Trustees and assist the Chancellor's Office in identifying resources necessary to support CSU innovation.

10. Definitions

Assign/Assignment: Transfer of patent ownership rights from one person/entity (the "assignor") to another (the "assignee").

CSU (or University): The Trustees of the California State University or California State University System, which includes all 23 individual campuses within the California State University System. For purposes of this Policy, the term CSU (or University) also includes associated CSU campus auxiliary organizations where the auxiliary organization is the entity responsible for management of intellectual property, compliance with the Bayh-Dole Act or is assigned the rights to the invention for the benefit of the CSU.

CSU Resources: Any combination of the following constitute support in the form of resources by the CSU:

- CSU, auxiliary or campus funds, regardless of source, which are administered under the control, responsibility or authority of the CSU or auxiliary;
- CSU staff, including student assistants, support staff, administrative support, etc.; or
- use of facilities, including buildings, equipment and any other facility or asset under the control of the CSU or campus auxiliary.

Inventor: CSU faculty, staff or students who contribute intellectually to the conception of a claimed invention.

Permissible Consulting Activities: Professional or scholarly services provided by CSU employees for outside compensation, which do not interfere with assigned CSU duties, do not utilize CSU Resources, and are not prohibited by terms of the CSU employment contract or other applicable CSU agreements or policies.

Scope of Employment: Any work the employee is expected to perform as part of the employee's assigned duties, including work that contributes to the employee's tenure, promotion or professional development and/or work performed with the use of CSU Resources or under an externally sponsored agreement. Excludes work performed outside of the employee's CSU appointment and not performed with the use of CSU Resources (see [Permissible Consulting Activities](#)).

Trade Secrets: Information that qualifies under the Uniform Trade Secrets Act, Cal. Civil Code § 3426 et seq., including a formula, pattern, compilation, program, device, method, technique or process, that derives independent economic value from not being generally known to the public or to other persons who can obtain economic value from its disclosure or use; and is the subject of efforts that are reasonable under the circumstances to maintain its secrecy. Cal. Civil Code § 3426.1(d).

PART TWO: Recommendations to the Chancellor

I. INTRODUCTION AND EXECUTIVE SUMMARY

A. Project Concept

In adopting *Access to Excellence* as the strategic plan for the California State University (“CSU” or “University”), the CSU Board of Trustees affirmed long-standing goals of the CSU to create and provide top-quality, higher-education opportunities that help students in California to be successful and well-prepared as future citizens, leaders and workers of the state.⁷ In addition, the plan focuses on the major role CSU has to play in shaping the economic, political and social environment of the State of California.⁸ The increasing importance of research and development, and the rapid advancement in technology, is likely to shape expectations for excellence in higher education.

As part of its mission, CSU aims to promote an academic environment where creative works, innovation and entrepreneurship are encouraged and supported. This mission is guided by well-established academic values and practices, including, among others, academic freedom and with it the privilege to generate and disseminate new knowledge. To that end, CSU supports the development of policies and procedures that express a sincere commitment to help support the production, dissemination and commercialization of intellectual property by its faculty members, students, employees and affiliates in a fair and equitable manner.

Many CSU faculty are actively involved in research, technology development, creative works and other scholarly activities across a wide spectrum of disciplines that have the potential to generate intellectual property. CSU’s diverse pool of talented faculty have interest and expertise in applied domains such as agriculture, engineering, water systems, biotechnology, coastal and marine sciences, energy efficiency, alternative energy, transportation, human factors in technology design and health and education. Increasingly, CSU is being engaged in the translation of new knowledge generated by research for commercial purposes through technology transfer. Annually, CSU has nearly \$0.6 billion in sponsored project expenditures and a survey of the total holding in grant and contract equity in the Science Technology Engineering and Mathematics (STEM) related areas conducted in April 2015 totaled over \$0.5 billion in multi-year funding, involving nearly 4000 faculty researchers and tens of thousands of students.

CSU has long recognized that engagement of students in research and other scholarly activities is a powerful tool for achieving student success: positively affecting analytic and critical thinking, increasing academic achievement and retention, clarifying choice of academic major, developing important teamwork and soft skills and promoting enrollment in graduate school admissions. Research experiences also provide the necessary skills to translate theoretical information into practical knowledge, allowing students to compete successfully for jobs and opportunities and participate effectively in the workforce after graduation. Student researchers, therefore, have the potential to conceive and generate intellectual property with commercial value and their rights and privileges must also be recognized and considered.

⁷ See *Access to Excellence Accountability Plan* available at <http://www.calstate.edu/accesstoexcellence/executive-summary.shtml>.

⁸ *Id.*

CSU's excellence in teaching and learning is achieved in part with the creative production of educational materials by our faculty, staff and students. Recognizing, protecting and sustaining the intellectual property created through our teaching and learning processes requires comprehensive copyright and licensing policies that faculty, staff and students understand and support. The institutional services to enable the consistent and timely application of copyright and licensing policies must be part of CSU's intellectual property strategy and should include easy access to information, professional development and consultation services.

Currently, CSU lacks any centralized policy or system to adequately support research, technology development and other creative endeavors among its faculty, staff and students. Recent efforts to promote student success and to encourage faculty entrepreneurship have highlighted the challenges faced by those interested in developing intellectual property. The legal and interpretive issues surrounding such policies can be very complex. Specifically, the wide disparity of intellectual property policies across those CSU campuses that have policies, and the absence of any policy on others, makes it difficult to provide consistent, accurate and relevant systemwide advice to the campuses when questions on intellectual property matters arise. Further, CSU's decentralized approach to addressing intellectual property issues often fails to provide the necessary structure and support to those engaged in research and development, particularly when issues of protection and technology transfer arise.

The IP Committee has been asked to evaluate the many challenges campuses face involving intellectual property, and to provide a recommendation on how CSU can best address these issues and provide the support necessary to encourage research and development of intellectual property among its faculty, staff and students. The IP Committee submits the following five recommendations for consideration, which are discussed more fully later in this report:

1. Develop and provide additional systemwide intellectual property support and guidance on technology-transfer and commercialization-related activities at the Chancellor's Office;
2. Develop and provide additional training and guidance to the CSU community on intellectual property matters;
3. Identify a Campus Intellectual Property Officer on each campus; and
4. Establish a Campus IP Committee on each campus to evaluate intellectual property.

By centralizing the CSU approach to intellectual property matters, this document aims to resolve some of the issues identified to better support CSU's historical mission to educate and further the intellectual endeavors of its students, faculty and staff by encouraging research, scholarship and creative activities.

This document should not be viewed in isolation but should be considered together with other relevant policies including those on academic freedom, conflict of interest and those related to intellectual property generated from sponsored research. We recognize that the rules and practices regarding intellectual property are dynamic and changing. While not explicitly discussed, due consideration needs to be given to the shifting academic practices towards an open educational ecosystem and the general movement for institutions of higher learning, as well as some federal funding agencies, to require all copyrightable intellectual property created with grant funding to offer open-source licensing. Indeed, at the time of writing, the Office of Educational Technology in the Department of Education announced a notice of proposed rulemaking advancing new regulation that would require all copyrightable intellectual property created with Department discretionary competitive grant funds to have an open-

source license. Any policies that are ultimately generated from these recommendations must, therefore, be considered living documents that may evolve and change over time.

B. Acknowledgements to Contributors and Authors

Members of the IP Committee were drawn from the ranks of Chancellor’s Office Business and Finance, Human Resources and Academic Affairs administrators, the Office of the General Counsel, campus-based Academic Affairs administrators and Research Auxiliary administrators, systemwide Affinity Group leaders and experts in fields such as advancement and technology transfer. The members of the IP Committee were chosen to ensure that the proposed recommendations receive input from multiple viewpoints, including from individuals with substantial knowledge and expertise in technology transfer and intellectual property matters, as well as those who work directly with faculty, staff and students and could therefore identify many of the problems and concerns these demographics face when participating in research.

This document capitalizes on the expertise of the members of the IP Committee as well as the experiences of those CSU campuses that have well-developed intellectual property and technology transfer capabilities. This plan also builds on the recommendations of the 2008 Joint Task Force on Patents and Technology Transfer and the 2011 report issued by the CSU Technology Transfer Implementation Task Force suggesting a more consistent approach on intellectual property protection and technology transfer.

Name	Title	Location
Jennifer Glad <i>(Co-Chair)</i>	University Counsel	Chancellor’s Office
Zed Mason <i>(Co-Chair)</i>	Interim AVC for Research Initiatives & Partnerships	Chancellor’s Office
Bradford Anderson	Interim VP for Research & Economic Development	San Luis Obispo
Susan Baxter	Executive Director, CSU Program for Education & Research in Biotechnology (CSUPERB)	San Diego
Sue DeRosa	Director of Sponsored Programs	Chancellor’s Office
David Dowell	Provost	Long Beach
Andrea Gunn-Eaton	University Counsel/Business & Finance Team Leader	Chancellor’s Office
Gerry Hanley	AVC for Academic Technology Services	Chancellor’s Office
Denice Helwig	Chief of Staff	Humboldt
Grace Liu	Grants & Research Administrator/ Intellectual Property Counsel	Fresno
Tommy Martindale	Director of Technology Transfer	SDSU Research Foundation
Margaret Merryfield	AVC for Academic Human Resources	Chancellor’s Office
Alison Sanders	Interim AVP for Research/ Director of Research & Sponsored Programs	San Francisco
John Swarbrick	AVC for Labor Relations	Chancellor’s Office

Marie Talnack	Director, Technology Transfer Office and Industry Clinic	Pomona
Shawna Young	Interim Director of Research & Sponsored Programs	Stanislaus

II.RECOMMENDATIONS

A. Recommendation 1: Develop IP Support and Guidance Function in the CO Office of Research

Systemwide support should be developed to provide guidance and resources on intellectual property issues to individual campuses. Specifically, the Research Office within the Chancellor’s Office should provide additional support and guidance to campuses on intellectual property, technology-transfer and commercialization activities, including by supporting, educating and identifying resources for each campus on intellectual property disclosure, protection and commercialization.

The creation of this function and support for the campuses is important to demonstrate that the new recommended policies come with a serious commitment by the CSU to provide the necessary support, especially to the small campuses with limited resources, to effectively implement the policies at each campus. It is envisioned that the Research Office will be available to work or consult with the Campus IP Officer (“CIPO”; see Recommendation 4, below) to support campus intellectual property activities. The IP Committee recommends that the Research Office would provide the following support and guidance to campuses:

1. Design, administer, and manage *IP, You and the CSU*—a CSU website dedicated to intellectual property issues, including policies, tech transfer training, FAQs, templates, etc. (see Recommendation 3 below);
2. Train and/or support the CIPOs where needed, including:
 - Clarifying the CSU systemwide Patent and Copyright Policies;
 - Helping the CSU with regulatory compliance and reporting;
 - Consulting with CIPO’s on issues of intellectual property ownership;
 - Directing CIPO’s to CSU resources for patent, copyright and licensing expertise, including experts to evaluate invention disclosure for patentable subject matter;
 - Working with CIPOs to protect intellectual property where appropriate, including working with experts to determine the estimated cost of protecting inventions; and
 - Working with CIPOs and outside vendors on tech transfer and commercialization matters.
3. Develop best practices documents, guidelines and checklists for campuses on intellectual property issues, including on invention disclosure, licensing and tech transfer;
4. Monitor and stay current on tech transfer-related regulations and intellectual property management best practices;

5. Design and/or support programs (e.g., I-Corps™ or Startup Quest) for faculty and student inventors to learn how to develop inventions for licensing and commercialization;
6. Track and publicize intellectual property activity, costs and revenue on campuses;
7. Assist, as appropriate, in the identification and securing of external resources and funding for entrepreneurship and the development and commercialization of intellectual property; and
8. Work with stakeholders systemwide to fund and design additional programs and support mechanisms to add value and make CSU technologies ready for commercialization.

B. Recommendation 2: Provide Additional Training and Guidance to CSU Community

The IP Committee recommends that the CSU provide additional training and guidance to the CSU community on issues related to intellectual property. Providing adequate training and education to CSU administrators, faculty, staff and students is an essential part of an effective intellectual property program. Indeed, creating programs that successfully encourage innovation and commercialization of intellectual property requires that faculty, staff and students have a better understanding of what intellectual property is and what can be protected. It also requires that CSU administrators and auxiliaries have easy access to a comprehensive and authoritative library of information and resources to help answer questions from faculty, staff and students about intellectual property issues that arise during the course of their programs, scholarship, research and other activities at CSU.

Any training and educational materials must be both accessible and easy to use in order to provide the greatest benefit. To that end, the IP Committee recommends creating a website, managed by the Research Office in conjunction with Academic Technology Services within the Chancellor’s Office, to provide relevant, current and authoritative educational resources to CSU community members on intellectual property issues. This website—*IP, You and the CSU*—will serve as an open library resource for the various training and reference materials related to a wide range of intellectual property topics. The training materials and resources may include a variety of training presentations (e.g., PowerPoint presentations, webinars and Skillport-type training materials), a calendar of upcoming internal and external training opportunities, document templates, a series of FAQs, information on exemplary practices, intellectual property policies and at-a-glance summaries and a list of non-CSU resources and organizations that provide information, training and additional resources related to intellectual property for higher education. These materials will help explain, among other things:

1. What is “intellectual property”?
2. What are my obligations to disclose intellectual property to the CSU?
3. Who owns the intellectual property rights of invented/created ideas, products or materials?
4. What rights are granted under patent, copyright and trademark law?
5. Is an invention or creation protectable under patent, copyright or trademark law?
6. What steps should be taken to protect my intellectual property rights?
7. When should I consider protecting my intellectual property rights?
8. What is technology transfer?

Responding to questions about intellectual property can best be accomplished with an understanding of the context or circumstances within which the issues arise. The design of the website resources will be

guided by this principle and the Frequently Asked Questions (FAQs) will address issues for CSU administrators and auxiliaries, as well as the authors or inventors of intellectual property, by describing typically encountered scenarios, along with analyses that help users understand the intellectual property issues and policies involved and the likely outcome. These scenarios will also be followed by a set of guidelines or checklists for administrators to consider when responding to the particular issue.

To support CSU administrators, auxiliaries and intellectual property creators being more proactive (vs. reactive) in developing their intellectual property strategy for a project, the website will provide easy access to a library of template agreements that can further help address intellectual property issues involving tech transfer, licensing and invention disclosure, among others. Templates, compliant with Federal, State and CSU guidance or regulations, will be created for the most common agreements based on input from the various campus and auxiliary documents. These documents include assignment agreements, non-disclosure agreements, cooperative research and development agreements, inter-institutional agreements on research and development, invention disclosure forms and material transfer agreements. CSU campuses and auxiliaries may refer to these documents to supplement existing agreements, or use them in their entirety if appropriate.

Convenient access to information resources, reference and policy documents and template agreements can be very helpful in supporting and scaling effective intellectual property practices, but more is needed. Systematic professional development of personnel to assure sufficient expert capabilities of CSU and auxiliary staff related to the ever-changing landscape of intellectual property issues, policies, practices and laws is essential for CSU's intellectual property strategy.

In addition to the training website, the IP Committee recommends that intellectual property training courses be developed and provided to campus, auxiliary and Chancellor's Office personnel. The intellectual property training courses can be developed by CSU-based subject matter experts, other CSU staff with intellectual property or tech transfer expertise and/or external professional organizations. The IP Committee recommends the CSU explore the possibility of having CSU Extended Education create additional training materials and courses that can efficiently and effectively address differences in skill and knowledge levels, as well as differences in the focus of the presentation, whether it be understanding the basics of patent law or information related to tech transfer. CSU's Extended Education division has the expertise to develop and deliver fully online, hybrid and face-to-face training. The intellectual property training strategy will need to be designed and offered in ways that are attractive to the different stakeholder groups needing the training and Extended Education has significant experience in doing so.

The library of resources within the *IP, You and the CSU* website and the various training opportunities need to be developed and managed to deliver the intellectual property support services in scalable, sustainable, reliable and authoritative ways. To accomplish these goals, the IP Committee recommends that the Campus IP Officers, in collaboration with the Assistant Vice Chancellor for Research and the Research Office, develop processes for the development, management and assessment of these intellectual property support services on an ongoing basis.

C. Recommendation 3: Identify a Campus Intellectual Property Officer on Each Campus

This report recommends that campus presidents designate a Campus Intellectual Property Officer ("CIPO") on each campus. While each campus already has resources dedicated to research

administration and related intellectual property matters, including issues around creative endeavors and scholarship, most do not have a designated campus point-of-contact on intellectual property issues. As research expenditures grow across the CSU, there is an increasing need for reporting around invention disclosures to comply with Bayh-Dole regulations. Most importantly, faculty, students and administrators need a local resource to provide guidance, answer questions and point to expertise on intellectual property issues. See [Appendix 2](#) for more details on suggested CIPO roles, responsibilities and strategies for implementation and sustainability.

The CIPO will be responsible for:

1. answering intellectual property questions that arise on campus and managing a process to address them;
2. assessing the campus needs for educational training and other intellectual property-related resources;
3. receiving and managing invention disclosures from campus inventors;
4. establishing, under the direction of the president, a committee (the “Campus IP Committee”) and a process for making recommendations or decisions involving intellectual property assignments, protection and commercialization;
5. coordinating the Campus IP Committee process, as needed, to make recommendations or decisions regarding the retention or release of rights to disclosed intellectual property – the CIPO should serve as a convener or chair and committee member and will also be responsible for recording and reporting on the recommendations and decisions made;
6. tracking subsequent development of the technological innovation or creative work where rights are not released to the inventor or author;
7. managing any intellectual property reporting requirements to the Chancellor’s Office, inventors or other regulatory agencies (ensuring compliance with the Bayh-Dole Act);
8. coordinating with the Research Office in relaying any campus-specific concerns/issues and any needed intellectual property support from the Office of the Chancellor or external resources; and
9. attending systemwide intellectual property training events.

D. Recommendation 4: Establish a Campus IP Committee on Each Campus

This report recommends that campus presidents establish or maintain a campus intellectual property committee (“Campus IP Committee”) to make campus-based decisions regarding intellectual property assignments, protection and commercialization. While we propose systemwide patent and copyright policies, we strongly recommend that the implementation of these policies and the operational decisions around intellectual property issues be made at the campus or auxiliary level. Sponsored research often drives development of intellectual property and such contracts generally vest ownership in the University or a campus auxiliary. The Campus IP Committee should include members experienced with tech transfer, faculty inventors and external domain experts in management and/or commercialization of intellectual property.

The Campus IP Committee will be responsible for deciding or making recommendations, on a case-by-case basis, on:

1. ownership of any intellectual property rights (e.g., sponsoring organization, University, auxiliary, author/inventor);
2. whether the University or auxiliary will release or retain rights to disclosed inventions; and
3. whether the University or auxiliary will seek to protect intellectual property rights on disclosed inventions.

III. FINANCIALS AND RESOURCES NEEDED

A. Financial Support Recommendation

The Research Office within the Chancellor's Office will be responsible for providing guidance and support to CSU campuses and auxiliaries to encourage innovation and tech transfer, as well as to assist campuses and auxiliaries with meeting their regulatory obligations (e.g., Bayh-Dole). The IP Committee recommends that each campus pay an annual fee of \$10,000 to help support the support and guidance functions of the Research Office proposed herein, including providing training and guidance on tech transfer and licensing activities, among others. The \$10,000 annual fee recommendation resulted from discussions with CSU campuses of various sizes. Rather than use a tithing methodology based on research expenditure volume, which might normally seem appropriate, the anticipation is that campuses will use this resource in varying degrees depending on the campus infrastructure, capabilities and resources.

B. Prospects for Profitability

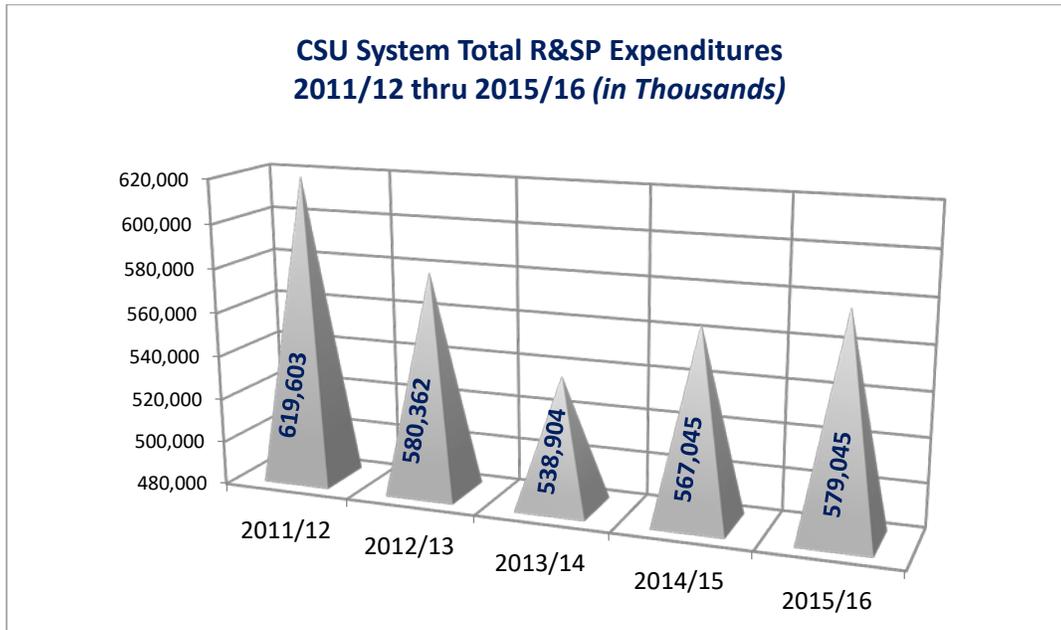
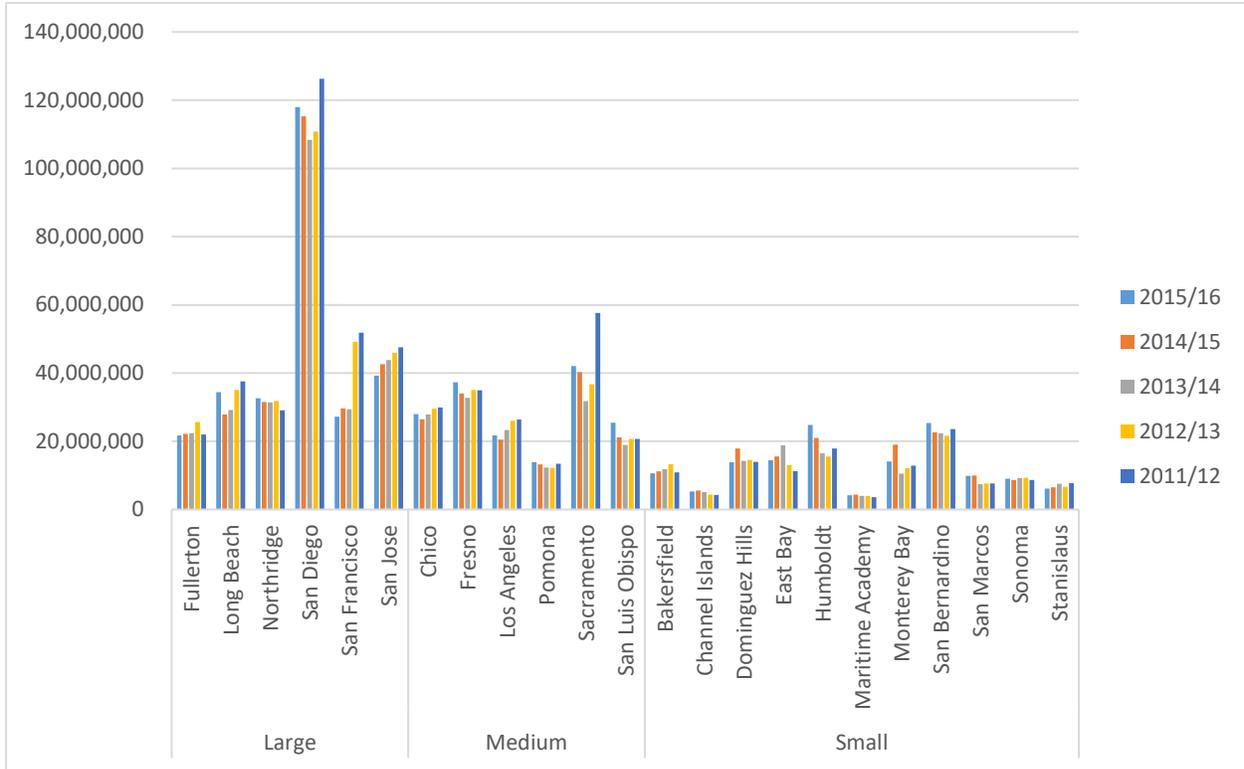
Research shows that tech transfer activities for higher education institutions are generally not profitable enterprises. Indeed, a recent survey by AUTM reported that on average 87% of university tech transfer offices operate at a loss.⁹ While we anticipate that the adoption of a systemwide intellectual property policy and investments in tech transfer will stimulate the development and transfer of intellectual property, the IP Committee's recommendations are not motivated by profit. Instead, the primary goals are to comply with the Bayh-Dole Act, increase student success, invest in and support faculty, staff and students in their professional development and to capture their ideas as intellectual property to be translated for the public good. Increasing our capacity for deriving intellectual property and promoting the tech transfer process will make our campuses more attractive to research partners, thereby generating more sponsored research funding. It is anticipated that the majority of any income from intellectual property will be in the form of license revenue, not realized for several years (e.g., 4-10 years) after invention disclosures are filed on campus. As royalty income and other income are generated, campus and auxiliary procedures will identify how funds will be shared for each invention within the parameters specified in the systemwide patent and copyright policies.

⁹ Walter D. Valdivia, *University Start Ups: Critical for Improving Technology Transfer*, Center for Tech. Innovations at Brookings (Nov. 2013) at 9. See also [Appendix 3](#) for excerpts from the AUTM report.

IV. APPENDICES

Appendix 1: CSU Research & Sponsored Program (RSP) Expenditures

5-Year Analysis of Total EXTERNAL RSP Expenditures: FY2011/12 through FY2015/16*



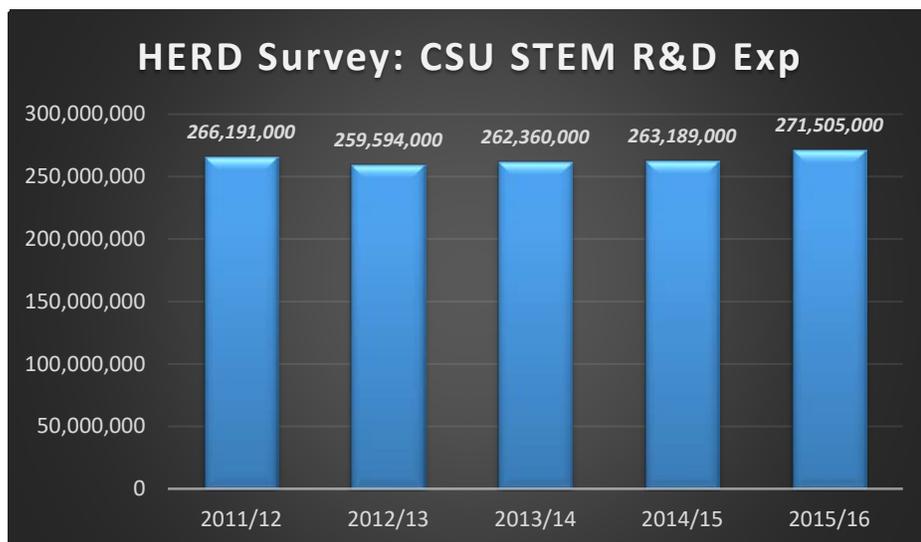
* Decrease in expenditures from 2011/12 related to reduction in federal expenditures due to the end of ARRA (American Recovery and Reinvestment Act) spending.

5-Year Summary of CSU R&D Expenditures – reported to the HERD (Higher Education R&D) Survey

Summary of STEM and Total R&D Expenditures from the HERD Survey FY2011/12 through FY2015/16

R&D Field	ALL R&D Exp (All Sources, INCLUDING Institution Funds)							
	STEM & Non-STEM							
Sum of Total Exp	FY							
Campus	2011/12	2012/13	2013/14	2014/15	2015/16	Grand Total	5-Year Av	
Bakersfield	1,241,000	2,602,000	2,432,000	3,192,000	3,161,000	12,628,000	2,525,600	
Channel Islands	524,000	1,236,000	3,862,000	1,949,000	1,383,000	8,954,000	1,790,800	
Chico	2,492,000	2,868,000	2,384,000	1,837,000	2,363,000	11,944,000	2,388,800	
Dominguez Hills	2,894,000	4,671,000	4,733,000	2,557,000	4,582,000	19,437,000	3,887,400	
East Bay	1,039,000	934,000	934,000	530,000	837,000	4,274,000	854,800	
Fresno	8,359,000	7,682,000	8,109,000	8,624,000	24,976,000	57,750,000	11,550,000	
Fullerton	22,222,000	18,478,000	7,919,000	5,611,000	5,755,000	59,985,000 *	11,997,000	
Humboldt	9,510,000	8,025,000	8,306,000	11,218,000	22,777,000	59,836,000	11,967,200	
Long Beach	16,446,000	12,796,000	10,097,000	8,830,000	16,390,000	64,559,000	12,911,800	
Los Angeles	7,192,000	7,659,000	5,172,000	5,010,000	5,371,000	30,404,000	6,080,800	
Maritime Academy	2,793,000	2,480,000	1,011,000	1,542,000	2,205,000	10,031,000	2,006,200	
Monterey Bay	6,567,000	6,129,000	4,787,000	5,492,000	5,680,000	28,655,000	5,731,000	
Northridge	29,491,000	9,640,000	12,991,000	13,333,000	16,330,000	81,785,000 *	16,357,000	
Pomona	6,597,000	6,988,000	5,455,000	4,611,000	5,254,000	28,905,000	5,781,000	
Sacramento	14,053,000	15,564,000	13,136,000	17,930,000	20,676,000	81,359,000	16,271,800	
San Bernardino	9,303,000	11,942,000	13,582,000	15,317,000	10,771,000	60,915,000	12,183,000	
San Diego	92,867,000	86,733,000	95,674,000	93,572,000	90,722,000	459,568,000	91,913,600	
San Francisco	30,291,000	33,885,000	29,457,000	26,345,000	28,273,000	148,251,000	29,650,200	
San Jose	34,727,000	38,326,000	43,509,000	45,037,000	41,662,000	203,261,000	40,652,200	
San Luis Obispo	17,412,000	16,067,000	15,096,000	16,312,000	18,081,000	82,968,000	16,593,600	
San Marcos	5,995,000	8,809,000	8,302,000	6,432,000	6,634,000	36,172,000	7,234,400	
Sonoma	825,000	1,938,000	1,714,000	1,163,000	693,000	6,333,000	1,266,600	
Stanislaus	1,881,000	1,342,000	1,136,000	1,080,000	1,248,000	6,687,000	1,337,400	
Grand Total	324,721,000	306,794,000	299,798,000	297,524,000	335,824,000	1,564,661,000	312,932,200	

* Corrections made in HERD Survey response in 2012/13, previous years total external funds were reported, not just R&D expenditures



Appendix 2: Recommended Strategies for Implementation and Sustainability

At most CSU campuses, the time commitment of a Campus Intellectual Property Officer (CIPO) is estimated to be only 40-120 hours per year. Other campus resources required would be basic intellectual property tracking software systems (possibly already in use on campus), committee members and ongoing training on the intellectual property decision-making process and reporting decisions required to comply with the Bayh-Dole Act.

At campuses with established technology transfer capacity, campus presidents may wish to appoint a technology transfer professional to serve as the CIPO and/or serve in an advisory capacity to the decision-making process. Campuses lacking adequate expertise to orchestrate this process may also contract with outside vendors or other CSU Campus Tech Transfer Offices for services such as patent search and initial invention triage to support retain or release decisions.

As invention disclosures are filed on campus, determination of intellectual property ownership can usually be made within the framework of the proposed CSU Copyright Policy and Patent Policy, taking into account the research sponsor, if any. The CIPO and Campus IP Committee reviews the submitted invention disclosure form and gathers evidence to determine whether the invention was developed: (1) within the scope of employment; (2) with the use of university human resources, facilities, equipment, supplies, materials and/or other campus-provided resources; or (3) under an externally-funded agreement awarded to the campus.

This report recommends a commercialization-based model in which rights to inventions are released when evidence suggests commercialization or patentability is unlikely and the interests and mission of the CSU are best served by such action. The CIPO and Campus IP Committee should first review disclosed inventions for patentability. Depending on resources, consultations with campus-based or external subject matter experts, with relevant technical expertise and/or a contract intellectual property service provider are advised. If the invention is not likely to be patentable, consideration should be given to whether the disclosed technology/work may be protected with copyright (software, literary works, etc.) or as a trade secret. In the case of non-patentable intellectual property, no filing or registration is necessary. If the invention is determined not to be protectable, the CIPO should notify the disclosing inventor(s) in writing of the institution's decision not to pursue patent protection and return the rights to the invention to the disclosing inventor(s) or funding agency, whichever is appropriate.

If the Inventor's campus decides to protect disclosed inventions, the CIPO and the Campus IP Committee should have a process to continually assess patent applications. Investment decisions to pursue patent applications are made at each juncture in filing and prosecution. The most important and expensive decision is whether to file a non-provisional application one year after filing a provisional patent application. The CIPO and Campus IP Committee should have a process to determine whether to continue investment prior to incurring additional expenses based on the invention's evolving commercialization prospects. In the case that the intellectual property is subject to a license or option agreement obligating a third party to cover patent expenses, the decisions to continue protection would be automatic.

It is difficult to predict the monetary value of an early-stage invention; only the market can determine the value of a patent. However, at an early stage, it may be possible to identify possible licensing targets, identify significant barriers to entry and assess whether the technology can be reasonably be

productized (technical feasibility). Innovation and commercialization programs can help gather market evidence regarding an invention's commercial potential. This kind of evidence can be useful for decisions about retaining or releasing patent rights both before and after patent filing. Assessing whether the technology meets a market need *prior* to patenting is ideal, but the process of gathering evidence to make that judgment may exceed the window in which patent protection is available (before public disclosure). A systemwide program for faculty inventors would serve as an extremely valuable resource to Campus IP Committees not affiliated with a tech transfer office.

As individual CSU campuses grow their number of invention disclosures and face these ownership and commercialization decisions, CIPOs can consult with Office of the Chancellor personnel or other CSU CIPOs that have patent prosecution or commercialization expertise. Over time, the advisory capacity of this systemwide network of CIPOs and Campus IP Committees will grow, providing ongoing professional support to each other and the CSU's faculty, student and staff inventors and innovators.

Appendix 3: Excerpts from National Survey Data from AUTM

AUTM TT Practice Manual Excerpts

AUTM Technology Transfer Practice Manual™  3rd Edition	Volume 2
	Part 1 Chapter 5
Page 13	Strategies for Managing Internal and External Constituencies <i>Patricia Weeks</i>

versity technology licensing, only 31 cases have generated more than \$1 million or more in cumulative royalties. One in 4,850 has been a big winner.³

In fact, experience tells us that, on average, it takes up to ten years for an institution to obtain a positive rate of return. Around the world, the cost of an effective technology transfer system is about 1 percent of research and development. An invention disclosure rate of \$2 million to \$2.3 million of research per invention disclosure is remarkably consistent across the United States and around the world.⁴

AUTM Technology Transfer Practice Manual™  3rd Edition	Volume 2
	Part 1 Chapter 2.3a
Page 7	The University of Virginia Patent Foundation: A Midsized Technology Transfer Foundation Focused on Faculty Service, Operated Using a Deal-Based Business Model <i>Robert S. MacWright, PhD, Esq.</i>

censed patents. The benefits of operating under this deal-based business model are described in the last section of this chapter. Of course, this approach requires that the combined technology transfer budget is adequate. A combined technology transfer budget equal to about 1 percent of a university's research budget should, in most cases, be sufficient for success.