

July 26, 2018

Technology Partnerships Office
National Institute of Standards and Technology
100 Bureau Drive MS 2201
Gaithersburg, MD 20899

**RE: RFI Response: Federal Technology Transfer Authorities and Processes,
Docket No. 180220199-819-01**

To Whom It May Concern:

Eagle Forum Education and Legal Defense Fund, a nonprofit organization founded by Phyllis Schlafly¹ in 1981, has long been engaged on matters relating to American invention, inventors, and patents. This includes the important role of transferring technology derived from federal research funding to entities in the private sector willing to pursue those inventions' commercialization in order to gain society the practical benefits of such discoveries.

We commend the National Institute of Standards and Technology for this request for information. National Institute of Standards and Technology (NIST) Director Walter Copan said at the April unveiling of this effort, "Patent protections and the reliability of our intellectual property as a property right in the United States was a key part of the strength of the American innovation system." Eagle Forum Education and Legal Defense Fund agrees, both in general and in reference to technology transfer from federal agencies and laboratories (or federal research grants) to the private sector.

The need to improve federal technology transfer from departments, agencies, and laboratories, especially in contrast with the robust track record of university technology transfer upon the Bayh-Dole Act's central tenet of secure, reliable private patent rights, was highlighted by Secretary Wilbur Ross at the same event. Further, we concur with the national interest Secretary Ross cited for leveraging technology transfer to the private sector: "Our practices, policies, regulations, and laws all need . . . to assure that technology transfer commercialization in the large-scale production and manufacture of innovative technologies occurs within the U.S. We must address growing trade imbalances by producing in America the innovative products that the rest of the world needs to buy."

We shall focus our comments on the principles of patent protection and reliable IP private property rights, then offer several recommendations to accomplish a better return on investment through more advantageous federal technology transfer policies and practices.

First Principles: Patent Protection and Private Intellectual Property Rights

Secretary Ross's and Director Copan's statements cited above align with the first principles of American intellectual property: Article I, Section 8, Clause 8 of the U.S. Constitution. The Founders intentionally empowered Congress to establish exclusive private property rights for inventors and authors to the fruits of their intellectual labors, precisely for the purpose of promoting economic gains through the expansion of knowledge and applied

¹ Phyllis Schlafly was an outspoken advocate of the rights of inventors, emphasizing the importance of those traditional rights to our national prosperity and security. She wrote often about this topic. A compilation of her writings on this topic is *Phyllis Schlafly Speaks, Patents & Inventions*. Skellig America, 2018 (Ed Martin, Editor).

industrial arts and sciences. Having done so by one of the very first laws enacted by the First Congress, the Founders unleashed an unprecedented, private property rights-based means of generating “the discovery and production of new and useful things,” as President Lincoln said, by uniting “the fuel of interest to the fire of genius.”

Patents and intellectual property provide inventors and creators the right to exclude. A patent secures these exclusive private property rights, essentially as a deed to intangible but defined property. These rights may be licensed to others, either exclusively or nonexclusively. “Quiet title” is important to assuring patent protection and the ability to enforce those rights against infringers.

Regarding technology transfer, Congress deliberately wrote the Bayh-Dole Act to rely on these same first principles, in order to secure private intellectual property rights and thereby facilitate the commercialization of discoveries originating from federally funded research. Bayh-Dole states, “It is the policy and objective of the Congress to use the patent system to promote the utilization of inventions arising from federally supported research or development”

The situation Congress sought to fix with Bayh-Dole and related technology transfer laws arose from the federal government funding tremendous discoveries, but holding onto the IP rights and erecting bureaucratic barriers to transferring not only the inventions but the property rights. By 1980, the U.S. government owned 28,000 patents from research it funded, but commercial entities used only 5 percent of those patents. Some 26 agencies’ rules controlled commercial use of federally owned IP. Grantees had to negotiate a waiver to take title to any discoveries. Grantees obtained title on a case-by-case basis. The government normally gave only nonexclusive licenses to patents. Thus, lack of a solid private property interest in these discoveries meant uncertainty that private-sector developers and investors couldn’t risk.

Bayh-Dole enables federal grantees to take sole title in the resulting discoveries and strike exclusive licensing arrangements with those willing to invest private resources into applied research and commercial development. This has resulted in this law’s achieving what its authors intended. Since 1996, Bayh-Dole patents and licensing have meant a \$1.3 trillion increase to U.S. gross industrial output, a \$591 billion increase to U.S. gross domestic product, 11,000 startup businesses, 4.3 million jobs supported, more than 200 FDA-approved drugs and vaccines developed, and over the past 25 years, university research has disclosed more than 380,000 inventions and been granted more than 80,000 patents.²

In contrast to Bayh-Dole’s nearly four-decade, IP rights-based track record, technology transfer from federal agencies and laboratories has backslidden over recent years. Federal agencies have steadily regressed on technology transfer, as Secretary Ross observed when he contrasted university results and federal government results: “Recent studies have shown that federally funded university research is about five times more likely to result in a licensed patent technology and about seven times more likely to result in an active patent license. Universities received \$1.78 billion in licensing revenue from their innovations in 2014. In comparison, the total amount of royalties received from licensing government inventions was only \$194 million in

² Biotechnology Innovation Organization and Association of University Technology Managers, “The Economic Contribution of University/Nonprofit Inventions in the United States, 1996-2015,” June 2017.

2014, the latest year for which data are available. In that year, universities receive \$66½ billion for R&D, while federal labs received \$42 billion.”³

Therefore, in the view of Eagle Forum Education and Legal Defense Fund, the first principles of America’s patent system and the basis for the success of the Bayh-Dole Act are clear: exclusive ownership or licensing rights, private property, secure and enforceable title, freedom to operate. These first principles of patent protection and IP rights are accompanied by other principles, which have led to the success of Bayh-Dole and technology transfer from federal laboratories and agencies during periods when it has been more productive and smoother: exclusive licensing terms; certainty over obtained IP rights; streamlined technology transfer processes and practices across departments, agencies, and laboratories; uniform, consistent decisionmaking practices across and within agencies; accountability and oversight; private-sector input; responsive practices, personnel requirements, and work ethics so as to expedite negotiations and minimize private-sector transaction costs; minimal limitations on private IP rights; protection of proprietary, confidential, business and competitively sensitive information and data, including trade secrets; and rewarding federal inventors through royalties and opportunities to engage in entrepreneurial endeavors and commercialization.

The returns on taxpayer money that goes into research at government labs at present fall far short of the rate of return on investment that federally funded basic research at universities achieves. Universities have the market-based, entrepreneurial ability to pursue technology transfer, patent licensing, royalty agreements, faculty and entrepreneurship, and the like. This “virtuous circle” based on exclusive, secure property rights in patents and IP bears fruit for the university itself, adds to the economic development of the locale and the state, creates wealth and jobs, fosters local innovation ecosystems, promotes collaboration with small businesses and industry, and not least, returns useful applications from the research federal taxpayers funded. The same should be as true of the taxpayer dollars that fund federal laboratories’ research. The best, most cost-effective and efficient means of improving the return on investment (ROI) of federal labs’ discoveries is to adopt the attributes of the highly successful U.S. private-sector patent licensing and commercialization as well as the Bayh-Dole regime.

Recommendations for Improving Federal Technology Transfer

Much of the lost potential return from federal technology transfer is self-inflicted. Thus, our recommendations have to do with righting the ship administratively. This is more a matter of will than of new laws and regulations. For instance, agencies should broadly construe private-sector interest in commercializing a federal patent as deserving vigorous pursuit to strike a deal. We suggest improvements that promote strong IP rights, restore vigorous oversight and accountability, align incentives, and encourage federal inventor entrepreneurship.

- ***Promote strong IP rights for private-sector commercialization.***

Model the Bayh-Dole elements that have stimulated its success in technology transfer, such as exclusive licenses and secure, enforceable IP rights. Adopt best practices and best provisions, based on contractual elements of cross-agency commercial successes, to constitute IP licensing templates; focus on business-friendly provisions relating to private ownership of derivative IP, protection of trade secrets, and limited, exceptional rights for federal use, march-in, etc. Any federal use, march-in, or related contractual provisions, guidance, implementing

³ Gene Quinn, “Commerce Secretary ready to push update to tech transfer laws to ensure greater commercialization,” IPWatchdog, April 20, 2018.

rules, etc. must both enumerate specific grounds for their invocation based on statutory authorities (e.g., inability to meet the needs of a dire national emergency, failure to develop the invention), and exclude specific grounds for invocation, especially disallowing for purposes of government price controls on the commercialized good, which are not sanctioned under the law. Federal use licensing and rights such as march-in, in particular, must be exceedingly narrow, relate to highly exceptional circumstances, and respect the transferred exclusivity contracted to the private-sector licensee, in light of the investment of resources now sunk in commercializing the technology; provide for just compensation, paid out of the taking agency's funds, to make whole from any taking of transferred technology. Vigorously enforce against the failure of any department, agency, or laboratory to notify the Secretary of Commerce pursuant to Bayh-Dole's "exceptional circumstances" provision of any intended exemption of a research program, and treat failure to notify as cause for revoking such exemption. In other words, transferring technology must be repainted as a bright-line rule, and it is essential to establish rigorous policies to prevent and punish violators with respect to federal agency or agent theft of a private-sector collaborator's or licensee's IP.

- ***Establish high-level technology transfer oversight and accountability.***

Reinvigorate the critical authorities Congress gave the Secretary of Commerce to ensure that Bayh-Dole was implemented appropriately and that federal agencies utilize the provisions of the Federal Technology Transfer Act to partner with the private sector. A high-level office established in the Reagan Administration successfully supervised the implementation of these laws in close coordination with the White House. The office stopped a number of international agreements that threatened to give away rights to taxpayer-funded R&D. The Clinton Administration diminished this function, which now has fallen into disuse. We strongly urge recreating this office at a high level in the department with cross-agency authority, in order to assure fulfillment of the statutory obligations of the Secretary of Commerce, which are critical for the effective, faithful management of federal research investment. This overdue oversight and accountability function must be restored, and both agencies and bureaucrats must be held legally or politically accountable for micromanaging or disrupting the statutorily intended bent toward transferring federal technology for private-sector commercialization. The office should be headed by someone with thorough knowledge of applicable laws who is experienced in technology transfer, preferably including in the private sector or at a research university. The first order of business should be to hold the Department of Education accountable for its blatant violation of statutory technology transfer standards for IP protection and outlicensing of such rights to private entities; force the Department of Education to repeal its Obama-era abrogation of this set of laws and regulations by using instead what is tantamount to a compulsory open-source order (Docket ID ED-2015-OS-0105); hold accountable those employees who proceeded with the regulation after they were informed that it violated Bayh-Dole.

- ***Align incentives for improving agency technology transfer.***

To improve federal technology transfer, enforce the Stevenson-Wydler Act, which requires that tech transfer be a top priority, central to each agency's and laboratory's mission.⁴ Accompany this with new standards and incentives that will spur business-friendly technology transfer deal-making. With input from federal inventors, technology managers, senior Commerce IP officials, successful IP-centered entrepreneurs, private investors in IP projects and enterprises, and related experts, there should be development of a set of standards, responsive practices, personnel requirements, performance standards and goals, and professional work ethics

⁴ Joe Allen, "Want a greater ROI for taxpayers? Restore the patent system, protect Bayh-Dole and cut the red tape strangling federal labs," IPWatchdog, July 9, 2018.

designed to expedite negotiations with private-sector collaborators and licensees, while minimizing private-sector transaction costs.

Base new standards on timely responsiveness to stakeholders and efficiency in closing licensing and related deals; penalize mediocre and poor performance by federal employees on such measures as responsiveness, reasonableness in negotiations, and stakeholder satisfaction. Repeal bureaucratic policies and practices that have developed over the past 25 years, especially Obama-era anti-IP-rights changes to licensing requirements which both impede efficient, successful closing of negotiations and enable second-guessing and delay of federal technology managers' good-faith efforts. Agency deal makers should have authorities like their university counterparts to negotiate and close deals without bureaucratic interference. That also means holding them legally and politically accountable for their performance. Reward each person in the technology transfer chain professionally for respecting stakeholders' IP rights, containing transaction costs, etc., and establish a look-back measure of the commercialization and market performance of the deals an official has facilitated in the previous five years — not exclusively on the most deals, the biggest commercial successes, or the richest royalty streams, but a real-world reality check in personnel reviews based on overall contribution to practical use, economic growth, and return on taxpayers' investment. Relieve from their duties any federal employees whose performance fails to live up to the technology transfer mission and the new standards.

Train technology transfer managers, their supervisors, and government lawyers on these new standards and requirements, drawing heavily from the best practices and training materials for patent licensing and technology management of leading organizations such as the Licensing Executives Society (USA and Canada) and the Association of University Technology Managers. Establish an oversight advisory board comprised of successful IP-centered entrepreneurs, private investors in IP projects and enterprises, and related experts, charged with advising the Secretary of Commerce and the to-be-revived high-level oversight office. Review the performance of each federal department, agency, and laboratory on each measure of technology transfer performance, comparing these data across agencies and with returns on investment. Suggest adjustments to technology transfer standards, policies, practices, performance measures, rules, and guidance. Report the data on agency performance along with findings and recommendations for improvements in the Secretary's annual report to the President and Congress as required under the Federal Technology Transfer Act. Among the new standards and performance criteria must be strong and clear ones designed to expect, meaningfully reward adherence to, and penalize failure in the protection of stakeholders' proprietary, confidential, and competitively sensitive information and data, including trade secrets.

- ***Enable federal inventor and tech transfer officer entrepreneurial opportunities.***

Root out conflict of interest policies and procedures at federal laboratories and research facilities that unnecessarily delay, frustrate, disrupt, or contradict the statutory technology transfer mission of these agencies. The Federal Technology Transfer Act appropriately provides for rewarding federal agencies and laboratories with the royalties from their respective licensed patents, and provides for sharing these royalties with federal inventors. Government inventors are akin to university faculty inventors, while technology managers have counterparts at universities. Therefore, it would be beneficial to adopt for the federal government the conflict of interest and entrepreneurial standards employed at leading research universities whose faculty and technology transfer officers negotiate and enter tech transfer deals and deservedly share in the royalties. The Massachusetts Institute of Technology, for example, has a model that addresses conflict of interest concerns, faculty responsibilities and incentives, IP protection

and commercialization, and world-class technology transfer procedures that benefit society; MIT's startups generate revenue equal to the 13th largest economy in the world. Federal inventors and other federal employees in the tech transfer chain would be better at their jobs if they had opportunities to engage in entrepreneurial and commercialization endeavors, similar to those of university faculty. Coupled with new standards and aligned incentives, entrepreneurial opportunities would give federal employees greater appreciation for the consequences of government-imposed delays, costs, and other bureaucratic barriers to commercialization. Thus, we recommend adopting academic policies, arrangements, and features that enable such opportunities.

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Eagle Forum Education and Legal Defense Fund appreciates this solicitation of input and the renewed focus on improving practical returns on federal research, and the opportunity to provide insights and suggestions. Streamlining the processes to transfer technology from federal research facilities in a business-friendly and IP-respectful manner holds great importance to America's realizing the potential economic and national security benefits. Otherwise, the amounts spent on research and on federal research facilities shortchange U.S. taxpayers.

Respectfully submitted,

/s/ Andrew L. Schlafly

Andrew L. Schlafly
Counsel for Eagle Forum Education and Legal Defense Fund
939 Old Chester Rd.
Far Hills, NJ 07931
Email: aschlafly@aol.com
Phone: 908-719-8608