



ANGEL CAPITAL ASSOCIATION

Response to NSF Request for Comment Submitted December 26, 2024

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National Science Foundation - Request for Comments

The U.S. National Science Foundation (NSF) seeks public comments to inform the proposed implementation of new intellectual property (IP) provision options for use in NSF public-private partnerships, particularly those advancing research and development, that include co-funding of awards by private partners. NSF is committed to fostering innovation and promoting the translation of research into practical applications. To enhance the effectiveness of public-private partnerships, NSF seeks to implement a set of options for IP provisions that provide greater flexibility and balance the interests of both academia and industry. Recent engagements, including the [2023 NSF-Industry Partnership Summit](#) and subsequent listening sessions, have highlighted the need for optional IP strategies that can adapt to the unique requirements of various funded projects. NSF intends to incorporate these IP options into partnership agreements involving industry and/or non-profit organizations for funding opportunities whose funded awards may result in the generation of IP.

Through this Request for Comments (RFC), NSF invites input from a wide range of stakeholders, including industry, academia, non-profit organizations, other government agencies, and other interested parties.

The 2023 NSF-Industry Partnership Summit and subsequent engagements revealed differing viewpoints in stakeholders' perspectives regarding NSF's existing IP terms. In response, the Directorate for Technology, Innovation and Partnerships (TIP) has developed a series of IP grant-of-rights options to address these concerns. These options are informed by the Bayh-Dole Act and aim to promote the practical application and commercialization of federally funded research while preserving potential access to the IP for the U.S. Government.

Below is the language for each of the three IP grant-of-rights options to be used in partnership agreements. These IP options can be tailored according to the particular research area and the specific terms and conditions agreed upon between NSF and the partner(s) in a particular public-private partnership.

A. Research License with Commercial Option

The disposition of rights to inventions or works of authorship made during NSF-funded research is governed by federal law, regulation, and policy, including but not limited to, 35 U.S.C. §§ 200-212 and 37 C.F.R. §401. Pursuant to applicable laws, regulations, and policies, the entire right, title, and interest of Intellectual Property (IP) that directly results from activities funded by NSF ("Project IP") is retained by the entity that created it. While recipients are permitted to temporarily withhold the publication of data and software related to inventions to facilitate patent application filings, NSF terms and conditions require the subsequent prompt publication of all research outputs—including results, data, and software—generated in the performance of the research.

All partners are entitled to a non-exclusive, royalty-free license for use of Project IP for research purposes for a period of 18 months from the date of disclosure of the Project IP. This license shall not extend to any IP other than Project IP. This 18-month period is structured as follows:

- 1. Notice Period: For the first 12 months after disclosure of the Project IP, any partner shall have a right to indicate in writing that they are exercising their Right of First Negotiation ("ROFN") for an opportunity to secure an exclusive commercial license during the Negotiation/Option Period.*
- 2. Negotiation/Option Period: Following the 12-month Notice Period, there shall be a 6-month period during which partners so exercising their ROFN may negotiate for an exclusive commercial license.*

If an exclusive commercial license is secured by one partner during the Negotiation/Option Period, all other partners' rights shall automatically become a perpetual, non-exclusive, royalty-free license for research purposes only.

If no exclusive commercial license is secured by the end of the Negotiation/Option Period, the non-exclusive license granted herein shall, for all partners, automatically convert into a perpetual non-exclusive, royalty-free license for research purposes only.

Pursuant to the Bayh-Dole Act, NSF is entitled to a non-exclusive, irrevocable, paid-up license throughout the world for use of Project IP that directly results from activities funded by NSF.

B. Convertible Commercial License

The disposition of rights to inventions or works of authorship made during NSF-funded research is governed by federal law, regulation, and policy, including but not limited to, 35 U.S.C. §§ 200-212 and 37 C.F.R. §401. Pursuant to applicable laws, regulations, and policies, the entire right, title, and interest of Intellectual Property (IP) that directly results from activities funded by NSF ("Project IP") is retained by the entity that created it. While recipients are permitted to temporarily withhold the publication of data and software related to inventions to facilitate patent application filings, NSF terms and conditions require the subsequent prompt publication of all research outputs—including results, data, and software—generated in the performance of the research.

All partners are entitled to a non-exclusive, royalty-free license for use of Project IP for both research and commercial purposes for a period of 18 months from the date of disclosure of the Project IP. This license shall not extend to any IP other than Project IP. This 18-month period is structured as follows:

1. *Notice Period: For the first 12 months after disclosure of the Project IP, any partner shall have the have a right to indicate in writing that they are exercising their Right of First Negotiation (“ROFN”) for an opportunity to secure an exclusive commercial license during the Negotiation/Option Period.*
2. *Negotiation/Option Period: Following the 12-month Notice Period, there shall be a 6-month period during which partners so exercising their ROFN may negotiate for an exclusive commercial license.*

If an exclusive commercial license is secured by one partner during the Negotiation/Option Period, all other partners' rights shall automatically convert into a perpetual non-exclusive, royalty-free license for research purposes only.

If no exclusive commercial license is secured by the end of the Negotiation/Option Period, the non-exclusive license granted herein shall, for all partners, automatically convert into a perpetual non-exclusive, royalty-free license for research purposes only.

Pursuant to the Bayh-Dole Act, NSF is entitled to a non-exclusive, irrevocable, paid-up license throughout the world for use of Project IP that directly results from activities funded by NSF.

C. Research-Only License

The disposition of rights to inventions or works of authorship made during NSF-funded research is governed by federal law, regulation, and policy, including but not limited to, 35 U.S.C. §§ 200-212 and 37 C.F.R. §401. Pursuant to applicable laws, regulations, and policies, the entire right, title, and interest of Intellectual Property (IP) that directly results from activities funded by NSF (“Project IP”) is retained by the entity that created it, following applicable federal law. While recipients are permitted to temporarily withhold the publication of data and software related to inventions to facilitate patent application filings, NSF terms and conditions require the subsequent prompt publication of all research outputs—including results, data, and software—generated in the performance of the research.

All partners are entitled to a non-exclusive, royalty-free license for use of Project IP for research purposes. This license shall not extend to any intellectual property other than Project IP.

Pursuant to the Bayh-Dole Act, NSF is entitled to a non-exclusive, irrevocable, paid-up license throughout the world for use of Project IP that directly results from activities funded by NSF.

DATES: Interested persons or organizations are invited to submit comments on or before 11:59 p.m. (EST) on Friday, January 24, 2025.

FOR FURTHER INFORMATION CONTACT: For further information, please direct questions to Allen Walker through email: NSF-IPOptions-RFC@nsf.gov, phone: 703-292-2291, or mail: U.S. National Science Foundation, ATTN: Allen Walker, 2415 Eisenhower Avenue, Alexandria, VA 22314, USA.

DIRECTIONS: NSF welcomes comments from the public on any issues that are relevant to this topic, and is particularly interested in answers to the below questions. Respondents only need to provide feedback on one or more questions of interest or relevance to them. Each question is voluntary and optional. The response to each question has a 4,000-character limit including spaces.

ACA Response

Overall Impact

How do you believe these proposed IP options will impact innovation, technology transfer, and economic growth?

The proposed IP options will make it more difficult to commercialize technology funded by NSF grants. We recommend that none of the options be available or implemented, and in the event that only these three options are available, we believe Angel Capital Association members would avoid any investment or involvement in companies who engage with the NSF.

When a company has exclusive rights to a patented technology, the company enjoys a "moat" that protects against competitors riding on the company's coattails. When another entity (such as the NSF) owns a patent and that patent covers technology critical to the company, the company is hamstrung until the company can negotiate a license. Because of the severe restrictions imposed by Options A, B, and C, it may be better for a researcher to never get a patent than to have to suffer through the NSF process.

Option A only permits commercial use after successful negotiation for IP rights, while Option B allows commercial use during the period of negotiation. Under either option, there is only a 12 month period to exercise the option to negotiate for a commercial license, and if that negotiation fails to reach an agreement by month 18, no commercial license is granted. There are two problems with these proposals. First, the negotiation occurs after company invests money to file the patent (as the patent must be paid for by the company, not the NSF). Second, the 12 month window to begin negotiations is arbitrary and unreasonable.

Negotiating after-the-fact is unreasonable, unfair, and will likely result in companies with NSF grants being toxic and un-investable. The startup is in an untenable position, as NSF can hold the startup company hostage by 'negotiating' for the key element essential for business. NSF should not have an incentive to squeeze the company with costs, terms, or other conditions, and the startup has no negotiating power to walk away. The negotiation is asymmetrical, with NSF having unchecked power to harm the startup, and the startup being completely at NSF's mercy. From our vantage point we believe most investors would direct their portfolio companies from ever engaging in the NSF grant process because of this alone.

The 12 month window to begin negotiations is an unnecessary restriction that serves no legal, practical, or policy purpose. Some technologies may take much longer to gain investor interest and gain traction in the market. Forcing the negotiation into an arbitrary 12 month window is commercially unreasonable.

Regarding Option C, the Research-Only License explicitly prevents commercial use, and therefore prohibits any economic impact of NSF's investment, in direct contradiction to the goals of Bayh-Dole. We urge that Option C never be offered, since there is no way to commercialize.

We recommend that NSF create a standardized, universal, non-negotiable license agreement with pre-defined license rates, royalties, costs, and any other terms. We

recommend that this license agreement applies to every NSF grant on the exact same terms, and that the license be available to all NSF grantees.

Only when the license is known and trusted ahead of filing a patent application can an entrepreneur justify the patent expense, as well as the subsequent investment that will be required to bring NSF-funded technology to market.

Balance

Do these options ensure a balanced distribution of IP rights between academia and industry partners? How can the proposed IP options be further refined to ensure maximum balance in IP arrangements?

These options undermine and eliminate the incentives for early stage companies to use technologies that arise from NSF grants. The uncertainty of a future negotiation for a patent right - which may be absolutely essential for a business - is unfair, whether the patent filer is in academia or industry. We believe that the Angel Capital Association members would avoid investing in any company subject to the suggested policies.

Flexibility

What additional flexibility should be incorporated into the IP options to accommodate and incentivize a range of research initiatives?

We do not believe that the IP options are workable in any manner for the early stage companies in which we invest. We recommend that NSF publish standardized, pre-determined license terms prior to any NSF grant so that the entrepreneur can determine ahead of time whether to pursue patent protection or not. We believe such a license should be fair, reasonable, and consistent across all NSF grants, but most importantly, pre-determined and non-negotiable, especially after the grantee already paid for and began the patent process.

A pre-defined, universal NSF license agreement may appear to be "inflexible", but from our perspective, it is the opposite. A universal, standardized NSF patent license agreement would eliminate uncertainty and allow the entrepreneur and the investor to focus on growing the technology and putting it in the hands of people who benefit from it.

In no situation will an after-the-fact negotiation provision be acceptable for angel investors.

Adoption

What strategies could NSF employ to encourage widespread adoption of these IP grant-of-rights options among potential partners?

We strongly recommend that NSF remove the three Options and refrain from imposing these unnecessary and restrictive Options on their grantees.

Because these Options are so onerous for portfolio companies, we think it highly likely that many prospective investors will refuse to provide capital, mentorship, encouragement, or support to entrepreneurs who go through the NSF grant process if the Options are imposed.

Barriers

What potential barriers exist to implementing these IP grant-of-rights options, and how might they be overcome?

The biggest barrier to implementation is that negotiation is after-the-fact. Negotiation under the Options only occurs after the patent is filed (at the entrepreneur's expense) and after time has passed, which may help indicate the potential value of the IP.

The only acceptable license terms must be fixed prior to filing the patent application and never afterwards. If the negotiations are after the patent filing, the asymmetry of the negotiations work against the entrepreneur.

Translation and Incentives

Do the proposed IP options effectively promote the translation of research into practice while incentivizing industry participation and ensuring benefits for universities and researchers? What improvements could be made to enhance these aspects?

The proposed IP options fundamentally halt any further investment in NSF-funded IP. It makes it all but impossible for an entrepreneur to first pay for a patent application, then negotiate afterwards to acquire the patent that they just paid for. Such a process makes it completely untenable to early-stage companies in which we invest.

Additional Options

Are there other IP grant-of-rights options or frameworks that NSF should consider to better support collaborative research initiatives and facilitate research impact?

We recommend that NSF publish standardized, universal license agreements that apply to every NSF grant. This agreement will be on a take-it-or-leave-it basis with no negotiations after-the-fact.

We recommend that the terms be public, standardized, and universal across all NSF grants, and not be changed from one grant to the next. With this standardized practice, NSF will spend much less time negotiating licensing contracts, and the public will be better served by standardizing all licenses.

With published, pre-determined terms, an entrepreneur can have the certainty to raise money from investors, build a company, and contribute to the economy. Without pre-defined agreements, the technology will never benefit the taxpayers.

Additional Comments

Is there anything else you would like to add?

We strongly recommend that the NSF abandon the three Options of this Request for Comment.