

April 15, 2024

Re: Hearing entitled: "Exploring SBA Programs: Reviewing the SBIC and SBIR Programs' Impact on Small Businesses"

Dear Members of the House Small Business Subcommittee on Economic Growth, Tax, and Capital Access,

Thank you for your attention to the SBIR program's impact on small businesses. The SBIR program plays an integral role in the startup ecosystem and for companies like mine, and regularly reviewing and improving the program is critical to ensuring policies designed to support founders are actually having the intended impact.

For startups engaged in research and development (R&D), funding can come from many sources—from personal savings, to venture capital, to government funding—including the Small Business Innovation Research (SBIR) program. As the co-founder and CEO of Indianapolis, IN-based startup, MITO Material Solutions—a company that creates additives that improve the durability and toughness of legacy industrial materials, and gives manufacturers the ability to make lighter and stronger products—the SBIR program has been an integral source of capital and has been essential to the commercialization of our technology. And while the SBIR program on the whole is critical to innovation and the success of the startup ecosystem, policymakers should pursue reforms so that it better works for startups and reflects the diversity of U.S. innovators.

The SBIR program has been a particularly successful government effort since its inception in 1977. It has [given rise](#) to more than 700 public companies and led to critical technologies that benefit the globe. For my company, the National Science Foundation (NSF) SBIR program has been instrumental in helping us commercialize our technology.

MITO first applied for an STTR through the National Science Foundation and was denied because the university had not licensed the patent to the company. We resubmitted as an SBIR with the option to license in our supporting documentation. We received the official award letter in December 2018, just as we finalized the license agreement from the university the month prior.

We used this grant funding alongside business plan competition winnings to launch MITO. We hired our first two technical hires who started full-time to work on scaling the technology while I secured additional angel funding to purchase assets for the lab and to bring myself on full-time. As we worked through the initial Phase I, we achieved significant technical milestones in our lab. With the testing capabilities of our university partners, we were able to show significant competitive improvements and even make our first sale of sample material to a large chemical corporation. This success led us to apply for the second phase of funding.

During our program we went through three program managers, and the right one can make a difference. Just as we were applying to Phase II, we got a new PM who encouraged me to apply as the Co-PI alongside our PhD in chemistry to show the review panel that our company was more than just a “science project.” I believe she is one of the main reasons we received our Phase II funding, which came at the most critical point in MITO’s life. At the time, we were running low on investor funding and our grant funding was keeping us alive. We applied for three grants (SBIR and matching Oklahoma State Grants) in Winter 2018, hoping to hear by late spring or early summer if we would be selected (6 months). By June, we had only received the smallest grant we applied for which would not have given us sufficient runway to stay open. By early July, we were accepted into Techstars and soon after that we received the call that our Phase II and our subsequent state grant would be funded to advance our technology further. This meant MITO received \$1.1MM in grants that summer alongside acceptance into the largest accelerator program in the world. That moment changed our company trajectory. We were able to secure additional investment because the scientific novelty was validated and de-risked through this prestigious program.

It’s not just MITO that has been helped by this program—other startups have similarly found success through the SBIR program. Olivia Walch, CEO of Arlington, VA-based startup, Arcascope, [told](#) startup policy organization Engine, “SBIR funding is the only reason my company exists now...SBIR funds gave me the money to build products that showed what we could do and bought me the time to learn how to talk about them to investors.” Dr. Chelsea Monty-Bromer, Founder & CTO of Cleveland-OH based startup, SweatID, agreed that SBIR funds were essential to growth, [telling Engine](#), “Without the SBIR/STTR program, we would not have been able to get the capital that we needed to grow. To get venture investment in Ohio, we would have needed to be closer to going to market. That meant the only way we could make it to this point was through SBIR and STTR funding.” And Neil P. Ray, founder and CEO of San Ramon, CA-based startup, Raydiant Oximetry, [stressed](#) that his company “survived on the SBIR program for initial support...and without the SBIR program, I don’t know if we would have been able to make as much progress as we have.” And without the support of multiple SBIR awards, they may not have been able to get through “the ‘valley of death’—the period between the emergence of a company’s new tech and its arrival to the marketplace.”

But despite these successes, startups have also faced challenges accessing an SBIR award, many of which are common amongst many government programs. And though I have witnessed some improvements to the program overall—namely, streamlining some processes like letters of intent and enhancing consistency across departments, much work remains. While Congress recently had an opportunity to implement reforms in 2022, the SBIR program was reauthorized without significant change and for just three years, meaning it will once again need congressional action in 2025. Policymakers should begin efforts now to address issues with the program and contemplate plans for reauthorization, including considering a permanent reauthorization, so that this startup-critical program is strengthened and has certainty.

Perhaps most importantly, policymakers should commit to improving the diversity of SBIR awardees to ensure the success of the program and strengthen the innovation resulting from its

awards. Agencies must do more to collect better demographic data about SBIR recipients to have a better understanding of neglected populations, including women, people of color, and those from rural areas/non-technology hubs, and put plans in place to improve outreach to communities so that they know what the SBIR program is, how to apply, and how it could help their startups. Agencies should also work to improve the diversity of [reviewers](#) as a means of leading to greater diversity amongst founders receiving awards.

For many startup founders and CEOs, the SBIR program feels out of reach due to the complexity of the application process. Oftentimes applicants and would-be applicants struggle without costly outside assistance and complying with application requirements that vary by agency. Without adequate guidance throughout the application process, many startups are ill equipped to not just locate SBIR opportunities, but also complete the arduous process. Some startups ultimately decide that the process itself is not worth the funding that could result. And while many founders are able to hire outside assistance to navigate the process, the reality is that most startups, particularly those launched by underrepresented founders and those in their early stages, are resource-strapped in terms of both time and money. Policymakers should work to streamline the application process so that it is more accessible to more founders—even [clarifying](#) things like preferred language and vocabulary for each agency can alleviate significant headaches for applicants—so applicants do not need to rely on grant writing specialists to be successful.

But it is not just the application itself that poses a problem for founders. In the event a startup is unsuccessful in securing an award they receive a denial with little-to-no direction as to how best to improve their odds of success for future applications. Agencies should work to implement mechanisms to provide feedback to founders so that they know how to best improve their chances for future funding cycles. Without feedback, we may be losing out on countless novel technologies to the complexities and opaqueness of the application process itself.

Application timelines also pose a barrier to startup participation in the SBIR program. While some agencies, like the NSF have improved in this respect, application approval timelines can be lengthy, and for fundraising startups, this can be catastrophic. Many startups in their early stages do not yet have consistent revenue and are consistently on the hunt for sources of capital to continue to build their businesses. This can be particularly acute for founders from underrepresented backgrounds because of additional difficulty accessing capital. Amidst lengthy approval periods, many promising companies may be forced to close their doors because of capital formation issues. Government must explore ways to speed up decision making in funding cycles so we don't lose the next great idea to common startup funding challenges.

Many founders from business backgrounds, as opposed to academic backgrounds, may also find the SBIR process challenging. For example, as an MBA with no scientific background, I believed I was not able to be funded on the initial grant, even though I was managing the project, accounts, and reporting requirements. At some agencies, [just](#) ten percent of reviewers come from a non-academic background—but many applicants have business backgrounds like mine and not PhDs, and therefore may struggle with an application process that often

emphasizes academic successes. Having a PhD as a Principal Investigator (PI) I believe made a big difference for the success of our Phase II application and other founders have experienced this as well. Ed Rudberg, CEO of Minneapolis, MN-based startup, Nucleic Sensing Systems affirmed this challenge in a profile with non-profit technology policy organization, Engine, [stating](#):

We're very lucky that NS²'s team includes several PhDs, but most startups don't have that. I think one of the difficulties with SBIRs is that businesses are often judged by academic standards rather than typical business standards. The SBA asks for applicants to provide publications and other materials that are more aligned with an academic background; there's no real way to show your business acumen. If we didn't have PhDs on our team, getting the funding would have been a lot more difficult.

Government should work to equalize the playing field for non-academic founders by developing more metrics for founders to prove their business success, in addition to academic success. Failing to support applicants with various backgrounds, including in business, means the government is missing out on the technologies created by promising entrepreneurs and may also [skew awards](#) toward research as opposed to commercialization.

The emphasis on a desired academic background is also apparent following receipt of an award. SBIR awardees must complete a significant amount of written documentation and accounting. This can be a significant barrier because few private companies are prepared to provide this sort of documentation so early in their lifecycle, and it took me weeks just to get things in order. It can be challenging to keep up with award compliance and startups would benefit from greater clarity on compliance-related issues. It would save founders significant resources if they had a better understanding, for example, of how a grantor wants the accounting related to the grant to be completed.

Finally, policymakers should consider ways to encourage startups to help the government identify its problems and propose solutions to those problems. Today's startups are creating technologies that fix issues the government has yet to even identify. Moving towards open competitions is one solution to [encourage](#) more, and more diverse, applicants, and would likely lead to more commercialization. For many startups, they could gain the government as a first, or early customer, setting them up for future success.

Thank you for the opportunity to provide feedback on the importance of the SBIR program, including successes and areas for improvement. This program is essential to the startup ecosystem, policymakers must do everything in their power to ensure the longevity of the program and to welcome more startups into the fold.

Sincerely,
Haley Marie Keith
Co-founder and CEO
MITO Material Solutions