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Sean Bonyun  
Chief of Staff  
Office of Science and Technology Policy  
Eisenhower Executive Office Building  
1650 Pennsylvania Avenue  
Washington, DC 20504

Dear Mr. Bonyun:

Thank you for the opportunity to provide comments to the White House Office of Science and Technology Policy (OSTP) on the U.S. bioeconomy. SSSI is a nonprofit organization that works with public and nonprofit entities across the country to create a better future through science, technology, innovation and entrepreneurship. We firmly believe in the importance of an appropriate policy framework to encourage a robust American bioeconomy and are pleased to provide these comments.

**1. What specific actions could the U.S. Government take to reinforce a values-based ecosystem that will guide the transformation and expansion of the U.S. Bioeconomy, in both the short- and long-term?**

One of the most significant policy concerns voiced by bio-focused SSSI members is intellectual property (IP) infractions by other countries. A report published last year by the National Counterintelligence and Security Center<sup>i</sup> identified biotechnologies, including medical devices, chemical manufacturing, and infectious disease treatments, as one of the top targets of foreign “intelligence collectors.” The federal government can establish respect for IP rights as a cornerstone of foreign policy.

A significant policy gap that the government should address is the availability of commercialization assistance for innovative technologies with market potential. The process of transforming an idea into a new product, service or business is challenging, and requires particular technical skills, market perspective and business acumen that are rarely present in one person. In many sectors of the bioeconomy, commercialization assistance is particularly important, as long and complicated regulatory processes further stand between a potential breakthrough and commercial success. Around the country—and particularly in the inter-coastal regions that have significant R&D activity but more limited private equity involvement—nonprofit and public organizations have been created to provide effective assistance to innovation-driven entrepreneurs (more information about these organizations is in our response to question #3). Unfortunately, these groups often rely on relatively meager and unstable revenues that are not at all in alignment with the services they provide to the country. A federal program could help sustain these support organizations, unleashing further American innovation to advance the U.S. bioeconomy. As an example of this type of policy, the bipartisan *Startup Act*<sup>ii</sup> would tap federal extramural R&D spending to create a commercialization assistance grant program.

**2. In what ways can the U.S. Government partner with the private sector, industry, professional organizations, and academia to ensure the training and continued development of a skilled workforce to support the growth of the Bioeconomy?**

One means by which the federal government can support the development of a skilled workforce is to encourage apprenticeships across the bioeconomy. As an example of this opportunity, consider the programs being implemented by GSK.<sup>iii</sup> The company’s United Kingdom operations include formal apprenticeship programs around engineering, supply chain, manufacturing, and R&D, for prospects with different levels of education. In the U.S., the company offers internships and cooperative placements with universities that both allow work and education to occur simultaneously. Rockville, Maryland, is the site of one of GSK’s U.S. programs, and the state of Maryland offers companies with registered apprenticeship programs the opportunity to receive a tax credit and cost-sharing on training expenses.<sup>iv</sup> Federal agencies, including the Department of Labor and National Institutes of Health, could help to promote

bioeconomy apprenticeships, both by educating companies in the biosector about the benefits of approaching workforce development through apprenticeships, and by offering incentives to adopting the programs.

Another means by which the federal government can strengthen the bioeconomy through workforce initiatives is by supporting efforts to develop workforce pipelines. In North Carolina, for example, community colleges, the Army, industry partners, and the NC Biotechnology Center (NCBiotech) have an initiative to train and connect veterans to careers in the life sciences.<sup>v</sup> Particularly during a tight labor market, programs that identify clear pathways for the bio workforce benefit employers by decreasing hiring times, and benefit employees by clarifying the economic potential of participating in a vetted training program. As with apprenticeships, agencies can support bioeconomy pipelines by educating potential stakeholders and by providing funding to facilitate the implementation of these initiatives.

### **3. In what ways can the U.S. Government partner with the private sector, industry, professional organizations, and academia to establish a more robust and efficient Bioeconomy infrastructure?**

Many initiatives around the country are currently working to cultivate a more robust bioeconomy. Venture development organizations (VDOs) are particularly suited to this work, because these nonprofit entities are public-private partnerships combining commercialization assistance, entrepreneurial development and capital access—all targeted in a specific geographic region. Several of these entities already focus on the bioeconomy, including NCBiotech, mentioned previously, and BioSTL, in the greater St. Louis region. Assistance initiatives offered by these organizations include NCBiotech’s translation research grant<sup>vi</sup> to further the commercial validation of a promising technology, and the BioGenerator investment vehicle<sup>vii</sup> at BioSTL, which provides patient capital early in the long development cycle of lifesciences and other bioeconomy companies. Programs like the U.S. Department of Commerce’s Regional Innovation Strategies helps to pilot new technical assistance initiatives at these organizations, but new policies, such as the commercialization assistance program mentioned above, could further strengthen their work.

One way VDOs, and other public and nonprofit entities, work to strengthen the bioeconomy is by addressing gaps in the Small Business Innovation Research (SBIR) program. Until the *John S. McCain National Defense Authorization Act for 2019*, SBIR funding was rarely able to assist companies in developing the commercial aspects of their technology. This practice was well behind recommended practices in startup assistance, which focus on solidifying market needs and opportunities as—not after—the technology is developed. Even now, agencies are struggling to implement the new technical and business assistance rules, and early signs suggest that many SBIR recipients will still need commercialization assistance from expert entities to improve their chances of long-term success.

In many parts of the country, SBIR remains relatively unknown, and so many organizations around the country provide awareness and application assistance to improve the rate of SBIR awards in their region. The U.S. Small Business Administration’s Federal and State Technology Partnership program (FAST) assists these efforts. As one example, the Iowa Innovation Corporation, which emphasizes biosciences innovation, increased the states participation in SBIR by 20 percent, including doubling the number of female participants and increasing rural business involvement by 50 percent. Unfortunately, the FAST program’s limited annual appropriation provides relatively small awards for such work.

We appreciate the interest of OSTP in considering the needs of the U.S. bioeconomy and thank you for your consideration of our comments. We would be happy to provide additional information and stand ready to work with you to advance American science, technology, innovation and entrepreneurship.

Sincerely,



Dan Berglund, President & CEO  
SSTI

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- <sup>i</sup> National Counterintelligence and Security Center. (2018). *Foreign Economic Espionage in Cyberspace: 2018*. Retrieved from: <https://www.dni.gov/files/NCSC/documents/news/20180724-economic-espionage-pub.pdf>.
- <sup>ii</sup> The *Startup Act* (S. 328) was introduced in the 116<sup>th</sup> Congress by Sens. Jerry Moran (R-KS), Mark Warner (D-VA), Roy Blunt (R-MO), and Amy Klobuchar (D-MN).
- <sup>iii</sup> For GSK's UK apprenticeships, see: <https://uk.gsk.com/en-gb/careers/apprenticeships/>. For their US programs, see: <https://us.gsk.com/en-us/careers/apprentices-students-and-graduates/internships-and-co-ops/about-our-programs/>.
- <sup>iv</sup> For Maryland's tax credit, see: <https://www.dllr.state.md.us/employment/appr/apprtaxcreditinfo.shtml>. For the training cost share program, see: <https://www.dllr.state.md.us/employment/mbw.shtml>.
- <sup>v</sup> See NCBiotech's website for more information: <https://www.ncbiotech.org/talent-and-careers/veterans-portal>.
- <sup>vi</sup> See NCBiotech's website for more information: <https://www.ncbiotech.org/trg#targetText=Translational%20Research%20Grant,in%20the%20life%20science%20sector>.
- <sup>vii</sup> See BioGenerator's website for more information: <https://biogenerator.org/>.