

SEPTEMBER 14, 2022

FACT SHEET: The United States Announces New Investments and Resources to Advance President Biden's National Biotechnology and Biomanufacturing Initiative

Today, the White House will host a Summit on Biotechnology and Biomanufacturing. The Summit is led by National Security Advisor Jake Sullivan, Director of the National Economic Council Brian Deese, and Director of the Office of Science and Technology Dr. Alondra Nelson who will be joined by Secretary of Health and Human Services Xavier Becerra, Secretary of Energy Jennifer Granholm, Deputy Secretary of Defense Kathleen Hicks, Deputy Secretary of Agriculture Jewel Brunaugh, Under Secretary of Commerce for Standards and Technology and Director of the National Institute for Standards and Technology Laurie Locascio, and Director of the National Science Foundation Sethuraman Panchanathan, as well as Senator Mark Warner and Representative Deborah Ross. Together, they will lift up the following key steps—with funding of more than \$2 billion—to advance President Biden's Executive Order to launch a National Biotechnology and Biomanufacturing Initiative to lower prices, create good jobs, strengthen supply chains, improve health outcomes, and reduce carbon emissions. U.S. departments and agencies will:

Leverage biotechnology for strengthened supply chains. The Department of Health and Human Services will invest \$40 million to expand the role of biomanufacturing for active pharmaceutical ingredients (APIs), antibiotics, and the key starting materials needed to produce essential medications and respond to pandemics. DoD is launching the Tri-Service Biotechnology for a Resilient Supply Chain program with more than \$270 million investment over five years to turn research into products more quickly and to support the advanced development of bio-based materials for defense supply chains, such as fuels, fire-resistant composites, polymers and resins, and protective materials. Through the Sustainable Aviation Fuel Grand Challenge, the Department of Energy (DOE) will work with the Department of Transportation and USDA to leverage the estimated 1 billion tons of sustainable biomass and waste resources in the United States to provide domestic supply chains for fuels, chemicals, and materials. These efforts will collectively lower prices for American families, especially in times of global supply chain turbulence.

Expand domestic biomanufacturing. The Department of Defense (DoD) will invest \$1 billion

in bioindustrial domestic manufacturing infrastructure over 5 years to catalyze the establishment of the domestic bioindustrial manufacturing base that is accessible to U.S. innovators. This support will provide incentives for private- and public-sector partners to expand manufacturing capacity for products important to both commercial and defense supply chains, such as critical chemicals. DoD will invest an additional \$200 million to support enhancements to biosecurity and cybersecurity posture for these facilities. The U.S. Department of Agriculture (USDA) will make \$500 million available through a new grant program in the summer of 2022 to support independent, innovative, and sustainable American fertilizer production to supply American farmers, which can make use of advances in biotechnology and biomanufacturing.

Foster innovation across the United States. The National Science Foundation (NSF) recently announced a competition to fund Regional Innovation Engines throughout the United States. These Engines will support key areas of national interest and economic promise, including biotechnology and biomanufacturing topics such as manufacturing life-saving medicines, reducing waste, and mitigating climate change. In May 2022, USDA announced \$32 million for wood innovation and community wood grants, leveraging an additional \$93 million in partner funds to develop new wood products and enable effective use of U.S. forest resources. DOE also plans to announce new awards of approximately \$178 million to advance innovative research efforts in biotechnology, bioproducts, and biomaterials. In addition, the U.S. Economic Development Administration's \$1 billion Build Back Better Regional Challenge will invest more than \$200 million to strengthen America's bioeconomy. Investments in New Hampshire, Virginia, North Carolina, Oregon, and Alaska will help expand the bioeconomy by advancing regional biotechnology and biomanufacturing programs. These regional investments will rebuild pharmaceutical supply chains to lower drug costs, catalyze a sustainable mariculture industry, better utilize mass timber to accelerate affordable housing production and restore forest health, enhance the production and distribution of regenerative tissues and organs, and develop a robust pipeline of biotech talent, expanding opportunities to underserved and historically excluded communities.

Bring bio-products to market. DOE will provide up to \$100 million for research and development (R&D) for conversion of biomass to fuels and chemicals, including R&D for improved production and recycling of biobased plastics. DOE will also double efforts, adding an additional \$60 million, to de-risk the scale up of biotechnology and biomanufacturing that will lead to commercialization of biorefineries that produce renewable chemicals and fuels that significantly reduce greenhouse gas emissions from transportation, industry, and agriculture. USDA's BioPreferred Program advances the development and expansion of markets for biobased products with a catalog of over 16,000 registered products. The new \$10 million Bioproduct Pilot Program will support scale-up activities and studies on the benefits of

biobased products. Manufacturing USA institutes BioFabUSA and BioMADE (launched by the DoD) and NIIMBL (launched by the Department of Commerce (DOC)) will expand their industry partnerships to enable commercialization across regenerative medicine, industrial biomanufacturing, and biopharmaceuticals. For example, NIIMBL will launch a biomanufacturing initiative that will engage the institute's 200 partners across industry, academic, non-profit, and Federal agencies to mature biomanufacturing technology needed to improve patient access to gene therapies. BioMADE will launch hubs supporting equitable regional development, create jobs nationwide, and enhance American economic competitiveness. BioFabUSA is standing up the BioFab Foundries, a first-of-its-kind U.S. facility that integrates engineering, automation, and computation with biology. BioFab Foundries will be accessible to U.S. innovators to enable manufacturing of preclinical and early-stage clinical products.

Train the next-generation of biotechnologists. The National Institutes of Health (NIH) is expanding the I-Corps program, a biotech entrepreneurship bootcamp. NIIMBL will continue to offer a summer immersion program, the NIIMBL eXperience, in partnership with the National Society for Black Engineers, that connects underrepresented students with biopharmaceutical companies, and support pathways to careers in biotechnology. In March 2022, USDA announced \$68 million through the Agriculture and Food Research Initiative to train the next generation of research and education, professionals.

Drive regulatory innovation to increase access to products of biotechnology. The Food and Drug Administration is spearheading efforts to support advanced manufacturing through regulatory science, technical guidance and increased engagement with industry seeking to leverage these emerging technologies. These efforts will increase medical supply chain resilience and improve patient access to new medical products. NIH's Accelerating Medicines Partnership[®] Bespoke Gene Therapy Consortium will support up to six new clinical trials, each focused on a different rare disease, to streamline manufacturing and regulatory frameworks. For agricultural biotechnologies, USDA is building new regulatory processes to promote safe innovation in agriculture and alternative foods, allowing USDA to review more diverse products.

Advance measurements and standards for the bioeconomy. DOC plans to invest an additional \$14 million next year at the National Institute of Standards and Technology for biotechnology research programs to develop measurement technologies, standards, and data for the U.S. bioeconomy. This support will catalyze development of capabilities for engineering biology, advance biomanufacturing processes and technologies, and help utilize artificial intelligence to analyze biological data.

Reduce risk through investing in biosecurity innovations. DOE's National Nuclear Security Administration plans to initiate a new \$20 million bioassurance program that will advance U.S. capabilities to anticipate, assess, detect, and mitigate biotechnology and biomanufacturing risks, and will integrate biosecurity into biotechnology development.

Facilitate data sharing to advance the bioeconomy. Through the Cancer Moonshot, NIH is expanding the Cancer Research Data Ecosystem, a national data infrastructure that encourages data sharing to support cancer care for individual patients and enables discovery of new treatments. USDA is working with NIH to ensure that data on persistent poverty can be integrated with cancer surveillance. NSF recently announced a competition for a new \$20 million biosciences data center to increase our understanding of living systems at small scales, which will produce new biotechnology designs to make products in agriculture, medicine and health, and materials.

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