

Forging the Future of Biopharmaceutical Manufacturing

AN INDUSTRIAL REVOLUTION

NIIMBL (The National Institute for Innovation in Manufacturing Biopharmaceuticals) is being formed to leverage a \$70 million cost-shared cooperative agreement with the National Institute of Standards and Technology (NIST) designed to innovate biomanufacturing in America. Through partnership and shared projects among academic, non-profit, and federal scientists, and leadership by industry, NIIMBL will revolutionize biopharmaceutical manufacturing in the United States. NIIMBL's applied research and development of manufacturing processes, workforce training, and regulatory coordination will advance U.S. biopharmaceutical production with world-leading technological innovation and manufacturing careers.

FOSTERING INNOVATION

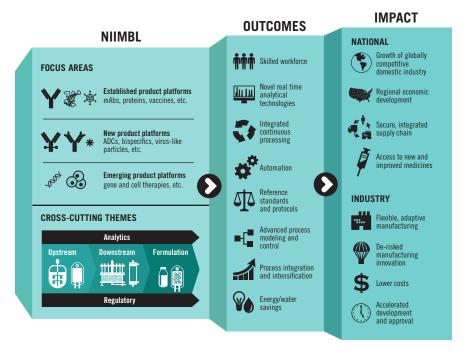
Through the cooperation and collaboration of its members, NIIMBL promises to address long standing and upcoming pre-competitive industry challenges in the U.S. biopharmaceutical manufacturing landscape. NIIMBL will leverage federal, state, and local resources to advance the development and manufacturing of next generation products and processes, including monoclonal antibodies, antibody-drug conjugates, cell immunotherapies, gene therapies, vaccines, process analytical technologies, single-use systems, and continuous manufacturing strategies, among others. Furthermore, NIIMBL will work with industry and policymakers to shift regulatory paradigms by establishing reference standards/materials and facilitating technology platforms to speed approval and lower costs while maintaining safety; while also encouraging domestic investment in infrastructure.

NIIMBL

- An Innovation Institute designed to revolutionize domestic biopharmaceutical manufacturing
- Solves industry challenges through partnership with industry, government, and academia
- Partners with stakeholders to train and retrain a robust,
 21st century workforce

BENEFITS

- Reduced cost of goods
- Shared risk of technology R&D and adoption through a broad investment ecosystem
- Accelerated process development
- Establishment of best practices
- Lower barrier for new technology introduction
- Sustainable processes and process development
- Access to better trained workforce
- Standardization of equipment, assays, parts, and methods
- Regulatory advocacy
- Full supply-chain engagement, bridging gaps from researcher to supplier to manufacturer to end-user
- Laying the groundwork for new development of novel drugs and delivery methods



NATIONAL IMPACT

Through its ongoing efforts, NIIMBL will have a tremendous impact on the biopharmaceutical manufacturing landscape in the United States. By partnering with top-tier universities and biomanufacturing workforce training centers, NIIMBL will empower workers in the full supply chain of U.S. biopharma manufacturing to innovate and grow U.S.-based production. Through training and retraining programs developed with academic and federal partners, NIIMBL will empower these workers to take advantage of 21st century job opportunities in a rapidly changing market.

GET INVOLVED: NEXT STEPS

Plan: Leverage the collective capabilities of NIIMBL. **Pledge:** Support NIIMBL's creation by helping meet and exceed the \$70 million NIST contribution.

For More Information: info@niimbl.org

ACADEMIC PARTNERS

Boston Children's TransLab Carnegie Mellon University Clemson University Dana-Farber Cancer Institute **Delaware State University Duke University Emory University** Georgia Institute of Technology Johns Hopkins University Massachusetts Institute of Technology Memorial Sloan Kettering **Cancer Center** Northeastern University North Carolina State University Pennsylvania State University **Purdue University** Rensselaer Polytechnic Institute **Tulane University** University of Colorado University of Connecticut* University of Delaware University of Iowa* University of Georgia University of Kansas* University of Kentucky* University of Maryland University of Massachusetts University of Minnesota University of North Carolina University of Pennsylvania University of Texas* University of Wisconsin* Worcester Polytechnic Institute

*National Institute for
Pharmaceutical Technology
and Education