PROPEL The National Center for Precision Medicine
PROPELLING PRECISION MEDICINE WITH EQUITY AND LEADERSHIP

What is "Precision Medicine?"

Precision Medicine, also called personalized medicine, is a modern healthcare approach that considers each person's unique genes, surroundings, and lifestyle when providing medical treatment.

PROPEL: The National Center for Precision Medicine works to improve national health equity and economic opportunity by focusing on the growth of Greater Philadelphia's Precision Medicine industry.

Healthy communities are created only by a coordinated commitment among their members, leaders, and innovators. PROPEL: The National Center for Precision Medicine presents a vision for Greater Philadelphia's progress through development of advanced technologies, and the industry and workforce that supports them, to propel Greater Philadelphia as a global innovation leader. PROPEL drives national economic security by improving health and equitable economic outcomes for our most underserved communities.

Formed in response to Greater Philadelphia's designation as a Tech Hub by the United States Economic Development Administration, PROPEL's Lead Member is Ben Franklin Technology Partners of Southeastern Pennsylvania, supported by over 50 regional partners.

Precision Medicine in Greater Philadelphia

These innovations, all created, developed and deployed in the Greater Philadelphia Region, are Precision Medicine at its core:

- *Spark Therapeutics receives first ever FDA approval for gene therapy*
- *University of Pennsylvania uses CAR-T to cure childhood leukemia*
- *Temple University used CRISPR technology in clinical trials to cure HIV*
- *Children's Hospital of Philadelphia performed first in the United States gene therapy for hearing loss*
- *Wistar/UPenn scientists lay the foundation for universal blood cancer immunotherapy*
- *University of Pennsylvania technology forms basis for mRNA-based vaccine technologies*
- *ChristianaCare spin-out CorriXR advances gene editing technology for squamous-cell carcinoma of the lung*
- *The National Institute for Innovation in Manufacturing Biopharmaceuticals (NIIMBL) at the University of Delaware officially launches program to develop, economically viable, shared manufacturing process and analytical platforms for Adeno-Associated Virus (AAV) gene therapy vectors*
- *Christiana Care, Drexel University and U Penn demonstrate the benefits of treating mild forms of chronic hypertension during pregnancy in a trial including 70% non-white participants.*

PROPEL's Initial Steering Committee

Ben Franklin Technology PArtners Southeastern Pennsylvania
University of Delaware
NIIMBL The National Institute for Innovation in Manufacturing Biopharmaceuticals
Tech Council of Delaware
Philadelphia Works Inc.
HSX
Drexel University
Drexel University College of Medicine
Virtua Health
Delaware Innovation Space

Why here? Why now?

The life sciences assets of the Greater Philadelphia Region (GPR) are well known, but continuously under-recognized and under-supported despite the groundbreaking new technologies emerging from our research institutions and life science companies. The payoff of turbo-charging an underperforming powerhouse such as the GPR could be huge given its latent potential. Leveraging the $1 billion in NIH funding and $1 billion in venture capital in the relevant industries makes the Hub a valuable force multiplier to fill the gaps between other sources and builds confidence we can achieve sustainability beyond the 5-year funding period and the 10-year horizon.

To be driven by its proposed use of funding from the US EDA's Tech Hubs Program, PROPEL will accelerate the promises of Precision Medicine by leveraging the dynamic life science and health assets resident within the GPR. The region possesses, and the award will support, all five pillars necessary for global competitiveness and lays the foundation to become a Living Laboratory:

TECHNOLOGY—What is created here can stay here.

COMMERCIALIZATION—We can make it here, build companies here and keep it here.

DEPLOYMENT—We can test it here, validate it here and deploy it here.

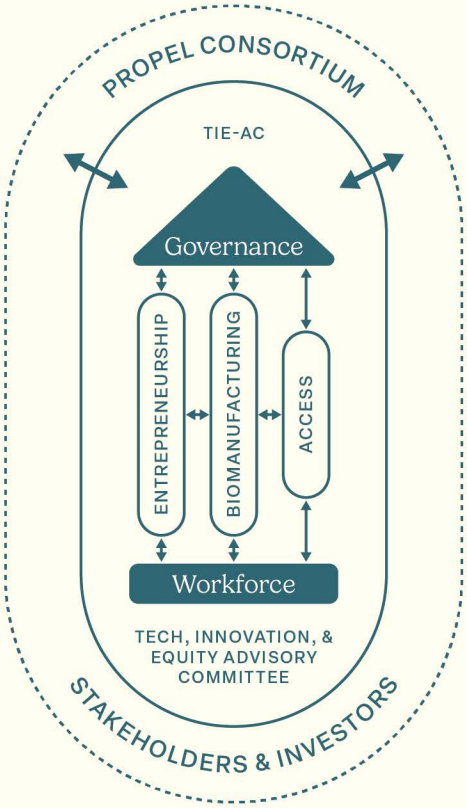
WORKFORCE—We can train people here and keep them here.

SPACE—We can locate companies here and keep them here.

PROPEL will build solutions so each pillar ensures diversity, equity and inclusiveness in the development of a technically competent, inclusive, community-conscious workforce, matched by increased opportunities for leadership and company formation. In turn, this ensures sustainability and continuous impact even after EDA funding ends. This integration of the region's significant assets leads directly to global competitiveness of the region with equitable delivery of these products, tools and interventions to the region, End-to-End Precision Medicine.

WHAT ARE WE DOING?

The technology focus of PROPEL is based on RNA/DNA technologies as applied to Cell & Gene Therapy (C&GT), Gene Editing, Vaccines and Therapeutics—all different modalities of Precision Medicine. These differences are also reflected in the components for successful commercialization and deployment: The workforce needed at bench level biotech is different from the workforce needed for manufacturing, clinical trial management, data management and public health. Manufacturing technologies and deployment strategies vary from C&GT and vaccines. Collectively, this speaks to the need for a centralized, organized, facile structure that can address targeted needs and anticipate new trends.



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