

June 30, 2025

The Honorable Tim Walz
Office of the Governor & Lt. Governor
Room 130 State Capitol
75 Reverend Dr. Martin Luther King Jr. Blvd.
Saint Paul, MN 55155

Dear Governor Walz:

The Minnesota Partnership for Biotechnology and Medical Genomics (the Partnership) brings together the State of Minnesota and the state's leading research institutions to accelerate groundbreaking scientific discoveries and drive innovation that improves human health. By filling critical funding gaps, the Partnership strengthens the state's position as a national leader in biotechnology, medical genomics, and healthcare innovation—ultimately improving lives and boosting the state's economy. The summary below demonstrates the value of this funding for Minnesota and features key highlights from the reporting period.

Advancing Research for a Healthier Minnesota

The Partnership funds cutting-edge research to uncover the root causes of disease and lay the foundation for improved prevention, diagnosis, treatment, and cures. The program's research portfolio is strategically aligned with the leading causes of death in Minnesota¹, focusing heavily on cancer, cardiovascular disease, neurological disorders, and diabetes, while also supporting work addressing rare genetic disorders, ophthalmologic conditions, and inflammatory diseases that carry serious health consequences for affected individuals and families. The Partnership advances research in gut microbiome health, cell senescence, and other areas that promote disease prevention and healthy aging.

The Partnership's research has already led to game-changing health innovations described below. These advancements have the potential to improve healthcare outcomes, enhance quality of care, reduce costs, and expand access, especially in Minnesota's rural communities. **So far, more than 20 Partnership-supported innovations have reached human testing or real-world use.**

Fueling Minnesota's Innovation Ecosystem and Economy

The Partnership plays a vital role in fueling Minnesota's medical technology sector, supporting the state's strengths in medical devices while accelerating emerging growth in biopharma, diagnostics and digital health. **The Partnership funding has supported more than 25 UMN and Mayo Clinic startups, each with the goal of leveraging Partnership funding to attract additional investment and bring transformative technologies to the market.**

Through strategic collaborations with leading medtech and investment organizations, the Partnership leverages state and institutional resources to accelerate commercialization and ensure that Minnesota's most promising health innovations receive the support needed from idea to impact.

¹ <https://www.cdc.gov/nchs/pressroom/states/minnesota/mn.htm>

Key highlights from reporting period of July 1, 2024 - June 30, 2025

Over the past year, the Partnership has continued to accelerate a portfolio of 70 medical discoveries and innovations towards improved human health and economic impact.

- \$6.9M was issued to 31 new awards during the reporting period (see attached table).
 - New awards focus on uncovering the root causes of disease, discovering new therapeutic approaches and developing new medical technologies.
 - Projects include research related to cardiovascular disease, cancer, pulmonary hypertension, Alzheimer's Disease, neurological conditions and rare diseases. Novel innovations include imaging and AI-based diagnostic software, vascular devices, and therapeutics for solid tumors.
- Previously funded projects achieved significant clinical and commercial milestones during the reporting period. Specific examples include:
 - **Early Cancer Detection Diagnostic** – Funded through the Partnership in 2015, the project resulted in a license to UMN startup company [Vocxi Health](#) in 2022. This innovation includes a partnership with Boston Scientific. As of 2024, Vocxi has raised \$8M in private funding. The MyBreathPrint product has been tested in 3 human clinical studies and found to be four times more accurate than other methods in the detection of stage 1 lung cancer.
 - **Life-Saving Device for Collapsed Lungs** – Funded through the Partnership in 2015, the project resulted in a license to Mayo Clinic startup [Pneumeric Inc.](#) in 2021. Since then, Pneumeric has raised \$4M and obtained FDA permission to begin marketing and selling the Capnospot product, which is used by medical professionals in emergency situations to detect patients with pneumothorax, air in the chest cavity causing an often-fatal form of collapsed lung. This technology is being used around the country and the company has expanded through worldwide distribution channels.
 - **Treatment for a Rare Genetic Disease** - Funded through the Partnership in 2021, a Duchenne muscular dystrophy treatment was licensed to UMN startup [MyoGenica](#) in 2022. The startup went on to receive a fast track STTR NIH grant and obtained FDA approval to initiate a clinical trial in 2024. The first-in-human Phase I trial is currently recruiting DMD patients and is supported by a \$500K grant from philanthropic sources.
 - **Minimally Invasive Treatment for Brain Bleeds** - Funded through the Partnership in 2020 and licensed to the Mayo Clinic Start-up [Endovascular Horizons](#) in 2022, this minimally invasive transvascular access to the brain simplifies the treatment of subdural hematomas and could potentially enable the delivery of drugs, neural interfaces, or neurostimulation electrodes to the brain. The system is currently under evaluation in a first-in-human study to assess safety and feasibility.

If you would like more information, please do not hesitate to contact us or our legislative staff, Christine Kiel at 612.626.3807 or Nikki Vilendrer at 507.538.5315.

Sincerely,



Peter Crawford, M.D., Ph.D.
Vice Dean of Research
University of Minnesota



Y.S. Prakash, M.D., Ph.D.
Vice Dean for Research
Mayo Clinic

cc: Senator Omar Fateh, Chair, Higher Education Committee
Representatives Marion Rarick, Dan Wolgamott, Co-Chairs, Higher Education Finance and Policy Committee

New Awards Issued During the Reporting Period (July 1, 2024 – June 30, 2025)	Funds Issued
Enhancement of electromechanical coupling to optimize delivery of implantable cardioverter defibrillator therapies	\$56,679
Threonine Tyrosine Kinase Inhibitors to Treat TP53-Mutated Myeloid Neoplasms	\$80,700
Development of a Contamination-Resistant Administration System for Reducing Infection Risks in Continuous Ambulatory Peritoneal Dialysis	\$321,811
A Microfluidic Diagnostic for the ICU (Sepsis)	\$40,350
Antisense Targeting AR mRNA Polyadenylation to Block Expression of AR Variants	\$192,170
Developing a novel therapeutic for infant respiratory distress syndrome	\$106,300
Reliable Assessment of Rare but life-threatening Atypical Infections (RARE-AI)"	\$242,100
Targeting metastatic solid cancers using next-generation tumor infiltrating lymphocytes	\$308,000
An essential role for complement signaling in microglia on diet-induced hypothalamic neuroinflammation, neurodegeneration and aging-associated cognitive impairment	\$750,000
Macrophage networks and checkpoints in cardiovascular disease	\$750,000
Accelerated aging as a mechanism and therapeutic target for muscular dystrophy	\$77,000
Identifying T cell subsets contributing to immune related adverse events caused by immunotherapy	\$750,000
Intraoperative Minibeam Radiation Therapy: An Innovative Approach for Unresectable Pancreatic Cancer	\$58,738
Targeted therapies in porcine tumor models of diffuse intrinsic pontine glioma	\$80,700
Novel Hybrid Distal Access Catheter with Microcatheter Extension System for the Treatment of Acute Ischemic Stroke	\$80,539
Development of a Pulsed Field Ablation Wire for Neuroendovascular Ablation	\$79,086
Development of an O'PROTAC to target C/EBPα	\$155,428
Lower Extremity Extracorporeal Distal Revascularization as a Novel Therapy for Peripheral Vascular Disease	\$79,519
Disruptive ultrasound hearing aid technology: Prototype development and usability/tolerability testing	\$319,279
Pre-aligned muscle tissues to facilitate regenerative therapy development	\$154,008
Translating Sts inhibitors into immune-enhancing antimicrobial therapies	\$143,844
Rotator cuff regeneration using BMP5	\$154,000
Using a Hybrid Cardiomyocyte Targeting Peptide to Deliver anti- RBM20 siRNA to Ameliorate Heart Failure with Preserved Ejection Fraction	\$240,645
Understanding Endothelial-to-Mesenchymal Transition in Vascular Remodeling of Pulmonary Hypertension	\$750,000
Device to Add Compliance to the Vascular System to Treat Refractory Hypertension due to Aortic Stiffness - Design for Manufacturability	\$167,592
Near silent MRI with novel predictive noise cancellation	\$104,122
Improving Lower Limb Prostheses through Novel Parametric Prosthesis Foot-Shoe System	\$77,899
Development of Clinical Grade RF Encoding MRI Methodologies for Compact and Inhomogeneous Magnets V3	\$101,460
Subtraction Radiography: Next-generation on-board imaging for radiotherapy	\$293,384
Identification of orthopoxvirus-derived, immunogenic epitopes for peptide vaccine development	\$80,200
BiliOnesie: A Soft, E-Textile Phototherapy Garment to Treat Neonatal Jaundice	\$100,595