

Interim Report to the Minnesota House Higher Education Committee

January 21, 2025

Presented by:

Dr. Peter Crawford, Vice Dean for Research, University of Minnesota

and

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The Minnesota Partnership for Biotechnology and Medical Genomics, formed in 2003, is a unique collaborative venture among the Mayo Clinic, University of Minnesota and State of Minnesota with the goal of positioning MN as a world leader in biotechnology and biomedical research that improves health and saves lives while offering economic advantages to the state. The collaboration has become a globally recognized model of innovation in the biomedical field, fostering research that improves the economy of our state, while targeting its most prevalent health conditions.

From the legislature's initial \$2 million investment in 2004 (matched by Mayo Clinic and the University) the Partnership has been a continuous success story with impactful outcomes. Partnership funding has been instrumental in helping to ensure UMN and Mayo innovations and discoveries are translated to positively benefit our communities and economy.

Since the first allocation in 2004, the annual appropriated amount varied until FY15. Since FY15, \$7.991M has been allocated annually to the program per legislated fiscal year, with \$500,000 being dedicated annually to projects focused on research for Alzheimer's disease and other dementias. The funding supports the following in the following areas:

- Discovery Science Research
- Translational Research
- Large Project/Infrastructure
- Technology Commercialization

PROGRAM SNAPSHOT

- Awarded \$167 million in competitive awards to 279 research and infrastructure projects
- Of this total, invested \$21,826,487 in Alzheimer's disease and dementia research
- Advanced 22 innovations through UMN and Mayo Clinic startup companies
- Enabled 16 innovations to reach clinical trials
- Partnership funding has led to 7 innovations reaching real-world use

EXAMPLES OF SCIENTIFIC, CLINICAL, AND ECONOMIC PARTNERSHIP IMPACT

- [Transcatheter Aortic Valve from Engineered Tissue](#) – Funded through the Partnership in 2014 and licensed to the MN startup Vascudyne in 2017
- [Next-generation Standards for Clinical Microbiome Analysis](#) – Funded through the Partnership in 2015 and licensed to the UMN startup CoreBiome in 2017. CoreBiome was acquired by OraSure in 2019

- On January 24, 2025, the Minnesota Supreme Court held that 68 members are necessary to constitute a quorum of the House. This document reflects proceedings that occurred before that decision was issued and does not reflect any changes to the Partnership in 2015 and licensed to UMN startup company VOCx Health in 2022. This is also a partnership with Boston Scientific.
- [Ultra-sound waveless radiation sensors for non-invasive cancer therapy](#) - Funded through the Partnership in 2015 and licensed to Mayo Clinic startup Pneumatic Inc. in 2021. This technology has advanced to patient use.
- [Improved Treatment of Tension Pneumothorax Decompression with Needle Thoracostomy Colorimetric Capnography](#) - Funded through the Partnership in 2015 and licensed to Mayo Clinic startup Pneumatic Inc. in 2021. This technology has advanced to patient use.
- [Duchenne muscular dystrophy treatment](#) - Funded through the Partnership in 2021 and licensed to UMN startup MyoGenica in 2022. In 2024 the FDA approved the first IND and clinical trial.

MOST RECENT AWARDS (See [Recent Press Release](#) for more information)

- An essential role for complement signaling in microglia on diet-induced hypothalamic neuroinflammation, neurodegeneration and aging-associated cognitive impairment.
- Macrophage networks and checkpoints in cardiovascular disease.
- Identifying T cell subsets contributing to immune related adverse events caused by immunotherapy.
- Understanding endothelial-to-mesenchymal transition (EndMT) in vascular remodeling of pulmonary hypertension.

LEGISLATIVE OVERSIGHT

An annual report is prepared and submitted to the State of Minnesota at the end of each fiscal year (see Appendix A).

EXECUTIVE OVERSIGHT

The Partnership Executive Committee (EC) is responsible for the performance of the state-funded programs, and provides guidance and direction to Program Leadership and Administrative Teams. The EC creates a framework for program funding allocation, reviews annual program plans, progress reports and outcomes data for each of the funding programs, and coordinates as necessary with program leadership (see Appendix B).

PROGRAM LEADERSHIP

The Program Leadership Team (PLT) is composed of scientific leaders from both the University of Minnesota and Mayo Clinic. They are responsible to set the scientific direction for the program and ensure expert review of project proposals.

ADMINISTRATIVE AND FINANCIAL MANAGEMENT

The cross-institutional Program Management Team (PMT) is responsible for the oversight, management and facilitation of all program operations and administrative responsibilities. They coordinate the requests and scientific reviews of project funding applications. They also coordinate the project implementation and management functions.

Funded Research Project Management:

- Research teams must provide regular progress and financial updates upon
- Research teams are required to provide final progress reports for PLT review
- Project budgets are reviewed quarterly between the PMT and Program Finance Manager
- Projects are tracked for 5 years following project closeout to monitor for outcomes meaningful to the Program and the State of Minnesota

June 2024 Annual Report to the State



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June 18, 2024

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:

A model of collaboration for 20 years, the Minnesota Partnership for Biotechnology and Medical Genomics (the Partnership) has brought together researchers from the University of Minnesota and Mayo Clinic to advance research aimed at improving the economic and human health of our state. The Minnesota Legislature continues to recognize the importance of the Partnership, and has authorized ongoing funding totaling \$8 million a year.

In December 2023, the Partnership awarded \$6.75 million to five projects that focus on the development of new research centers to address diseases and conditions that impact Minnesotans; each of these awards brings together investigators from the Mayo Clinic and the University of Minnesota:

- Minnesota Functional Omics Resource (MNFORce)
- Center for Functional Genomics of Immunotherapy (CFGI)
- Organoid Biomanufacturing for Transforming Healthcare
- Towards a Center for Advanced Synucleinopathy Diagnostics (ASCEND): Development and optimization of nanoparticle-enhanced seed amplification assays for blood-based detection of synucleinopathies
- The Healthy Aging in the Senior Years (HATS) Study: Cardiovascular Contributions to Brain Health and Dementia in Twin Cities Black Residents

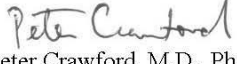
Additionally, \$2.98 million was awarded in 2023 to 17 projects with commercialization potential through the Partnership's Translational Product Development Fund. These projects include treatments and diagnostic technologies for cardiovascular disease, genetic disorders, cancer, infectious diseases, and infertility.

Partnership awards have led to successful licensing, patents, and commercialization of discoveries. Since the initiation of the Partnership, there have been 11 licenses to existing companies for Partnership-supported innovations, and the formation of nine new start-up companies in Minnesota. Partnership funding has advanced six innovations to real-world use, including [Pneumeric Capnospot](#), the first FDA-approved medical device funded through the Partnership. Capnospot is a medical device used to treat tension pneumothorax, a life-threatening medical condition. The approval of this device is a significant milestone for the Partnership, and exemplifies the potential to impact patient health.

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,


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


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

cc: Senator Omar Fateh, Chair, Higher Education Committee
Representative Gene Pelowski, Jr., Chair, Higher Education Finance and Policy Committee

Program Governance

EXECUTIVE OVERSIGHT

The MNP Executive Committee (EC) is responsible for the performance of the state-funded programs, and provides guidance and direction to Program Leadership Teams. The EC creates a framework for program funding allocation, reviews annual program plans, progress reports and outcomes data for each of the funding programs, and coordinates as necessary with program leadership.

Committee Role: Serves as the official decision-making body for the state-funded collaborative programs. This Committee serves as a liaison to the State of Minnesota Legislature, and is accountable to the State Legislature. The EC drives the overall strategy and direction of MN state-funded collaborative programs between UMN and Mayo.

Committee Responsibilities:

- Delegate program authority to Program Leadership Team and review performance
- Determine an annual framework for programs, including alignment with legislative intent, program goals and success metrics
- Review and approve annual plan for programs including budget, funding cycle, eligibility criteria, review criteria, and process
- Review and approve annual progress report for programs including budget and outcomes
- Review and approve annual reports to the State, and legislative and audit reports
- Act as the decision-making body in situations where there is dissenting opinion among a Program Leadership Team
- Members will adhere to applicable Conflict of Interest Policies

UMN	Role	Mayo
Jakub Tolar, MD, PhD VP Clinical Affairs Dean, Medical School	Executive Advisor	Vijay Shah, MD Executive Dean for Research
Peter Crawford, MD, PhD* Vice Dean for Research	Committee co-Chair/ Senior Leader	Y.S. Prakash, MD, PhD* Vice Dean for Research
Jane Welter, MBA* Senior Director for Research Strategy & Operations	Committee co-Secretary/ Administrative Lead	Nathan Wiedenman, PhD* Director, Translation to Practice
Amy Leslie Director of Communications	Communications	Susan Buckles
Christine Kiel	Government Affairs	Nikki Vilendrer

*Primary committee contacts and liaison to Program Leadership Teams

PROGRAM LEADERSHIP

The Program Leadership Teams (PLTs) are composed of equal members from the UMN and Mayo as delegated by the Executive Committee.

Role: PLTs are accountable to the Executive Committee. PLTs are responsible for working within the EC-approved framework to develop and execute annual program plans in alignment with legislative and program goals.

PLT Responsibilities:

On January 24, 2025, the Minnesota Supreme Court held that 68 members are necessary to constitute a quorum of the House. This document pertains to proceedings that occurred before that decision was issued and are no longer active.
See *Simon v. Demuth*, No. A25-0066 (Minn. Jan. 24, 2025) (consolidated with *Hortman et al. v. Demuth et al.*, No. A25-0068).

- Responsible for program success
- Propose measures of success to EC for approval, working within EC framework
- Develop, review and/or revise annual program plans for EC review
- Review all projects submitted to the program for funding
- Approve funding allocation for individual projects and/or program initiatives
- Prepare annual reports to the State of Minnesota for EC review
- Approve internal or external communications related to program activities
- Responsive to legislative audit
- Responsive to internal audit
- Members must adhere to Conflict-of-Interest Policies

ADMINISTRATIVE AND FINANCIAL MANAGEMENT

The cross-institutional Program Management Team (PMT) works in collaboration with the PLT and supports activities across all programs and committees/teams. Management of the entire project lifecycle including, project intake, review coordination, decision notification, project set-up, project support and monitoring - in accordance with EC-approved program plans.