

Minnesota Partnership
for Biotechnology and
Medical Genomics

UNIVERSITY
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 MAYO CLINIC

Minnesota Partnership for Biotechnology and Medical Genomics

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History and Overview

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.

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 & Economic 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.
- [Ultra-small wireless radiation sensors for in vivo dosimetry in cancer therapy](#) – Funded through the Partnership in 2015 and licensed to UMN startup company VOCxi Health in 2022. This is also a partnership with Boston Scientific.
- [Improved Treatment of Tension Pneumothorax Decompression with Needle Thoracostomy Colorimetric Capnography](#) – Funded through the Partnership in 2015 and licensed to Mayo Clinic startup Pneumeric 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

- 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.

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

Oversight

Legislative Oversight

Higher Education Committee

- An annual report is prepared and submitted each fiscal year

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.

Program Leadership, Administrative & Financial Management

Program Leadership

Composed of scientific leaders from both UMN and Mayo, they 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, as well as 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

Project Impact Metrics

The following outcome metrics are tracked for all funded research projects:

- Scientific dissemination through publications
- Project sustainability through follow-on funding
- Advancement of intervention to next stage of testing or regulatory approval
- Licenses to existing companies
- Product on market or otherwise accessible outside of a research setting
- New company formation

Discussion