

Date: February 7, 2025

To: Minnesota House Higher Education Committee

From: Dr. Peter Crawford, Vice Dean for Research, University of Minnesota
Dr. Y.S. Prakash, Vice Dean for Research, Mayo Clinic

Re: Minnesota Partnership for Biotechnology and Medical Genomics

We appreciate the opportunity to respond to your recent questions regarding the Minnesota Partnership for Biotechnology and Medical Genomics, a unique collaborative venture among the Mayo Clinic, University of Minnesota and State of Minnesota.

The attached summary report provides the biennium and total budget for the program (see page 3). Since FY15, \$7.991M has been allocated annually to the program per legislated fiscal year. The total funding for FY16-25 is \$82.410M. Also included in the attached report are the awards made from the program over this same time frame.

Projects are tracked for 5 years following project closeout to monitor for outcomes meaningful to the Program and the State of Minnesota. Some highlighted accomplishments include: advancement of 22 innovations through UMN and Mayo Clinic startup companies, enablement of 16 innovations to reach clinical trials, and 7 innovations reaching real-world use. The attached summary further describes the meaningful impact this program has across 3 areas:

- Advancing Research for a Healthier Minnesota
- Fueling Minnesota's MedTech and Biotech Innovation Ecosystem
- Strengthening Industry Collaboration and Economic Impact

These outcomes are specific examples of scientific, clinical, and 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.

The University of Minnesota and Mayo Clinic are both committed to the success of this program and on continuing to generate impact for the State of Minnesota. This is demonstrated by the leadership, faculty and staff effort dedicated to the governance, leadership, scientific oversight, and administrative and financial services support that is provided as in-kind contributions to this program.

The Minnesota Partnership for Biotechnology and Medical Genomics: Closing Critical Gaps in Research and Innovation Funding

The **Minnesota Partnership for Biotechnology and Medical Genomics (the Partnership)** brings together the State of Minnesota and the state's leading research institutions to **fill gaps in traditional research funding**—accelerating groundbreaking scientific discoveries and driving innovation that improves human health. By funding critical areas often overlooked by national programs, the Partnership ensures that promising research and emerging technologies receive the support needed to advance from concept to real-world impact. The attached spreadsheet provides a detailed breakdown of Partnership expenditures, while the summary below highlights the value of this funding for Minnesota and beyond.

Advancing Research for a Healthier Minnesota

The Partnership funds cutting-edge research to uncover the root causes of disease—work that is essential for developing future prevention, treatment, and cures. The program's research portfolio is **strategically aligned with the leading causes of death in Minnesota¹**, focusing heavily on cancer (25% of funded projects), cardiovascular disease (32%), neurological disorders (17%), and diabetes (9%).

Beyond these major diseases, the Partnership plays a **critical role in supporting research that lacks sufficient federal funding** but significantly impacts Minnesotans. This includes rare genetic disorders, ophthalmologic conditions, and inflammatory diseases—conditions that may not be as well-funded nationally but carry serious health consequences for affected individuals and families.

Additionally, because **national funding often prioritizes treatment over prevention**, the Partnership **fills a key gap** by advancing research in gut microbiome health, cell senescence, and other areas that promote disease prevention and healthy aging. This essential scientific groundwork lays the foundation for improved prevention, diagnosis, treatment, and cures.

The Partnership's research has already led to **game-changing health innovations**, including a [noninvasive early disease detection system](#) and a [portable pneumothorax detection device for use in patient transport](#). These advancements have the potential to improve healthcare outcomes, enhance quality of care, reduce costs, and expand access—especially in **Minnesota's rural communities**.

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

Fueling Minnesota's MedTech and Biotech Innovation Ecosystem

Minnesota has a higher concentration of medical technology companies per capita than any other state,² with the University of Minnesota and Mayo Clinic serving as key drivers behind the state's global leadership in medical innovation. As home to **the world's largest medical device company (Medtronic)** and the **nation's highest concentration of medical device jobs**, Minnesota is a hub for cutting-edge medtech, biopharma, and digital health advancements.

The **Partnership plays a vital role in fueling Minnesota's medical technology sector**, supporting the state's strengths in medical devices (39% of funded innovations) while accelerating emerging growth in biopharma (36%) and diagnostics/digital health (20%). By **bridging the funding gap** between early-stage research and commercialization, the Partnership has helped launch **22 high-potential startups**—each with the goal of leveraging Partnership funding to attract additional investment and bring transformative technologies to market.

Strengthening Industry Collaboration and Economic Impact



The Partnership is deeply integrated into Minnesota's innovation ecosystem, collaborating with leading medtech and investment organizations, including:

- Medical Alley Association
- MNSBIR, Inc.
- Launch Minnesota
- Mayo Clinic Ventures
- University of Minnesota Venture Center & Technology Commercialization Office
- Local incubators, angel investors, and venture capital firms

These strategic partnerships **ensure that Minnesota's most promising health innovations receive the support needed from idea to impact**, leveraging state and institutional resources to accelerate commercialization. By **filling critical funding gaps and driving innovation**, 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.

Prepared February 5, 2025

² lifechanginginnovation.org

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1	The Minnesota Partnership for Biotechnology and Medical Genomics 10 Year Award Data		
2	Biennium Period		Amount
3	2016-2017		\$15,982,000
4	2017		\$2,500,000
5	2018-2019		\$15,982,000
6	2020-2021		\$15,982,000
7	2022-2023		\$15,982,000
8	2024-2025		\$15,982,000
9	2016-2025		\$82,410,000
10			
11	Legislated Year	Award Description	Funds Issued
12	FY16	A novel antimicrobial peptide for drug-resistant bacterial infections	\$ 615,241.00
13	FY16	Epicardial pacing and defibrillation with a novel percutaneously implanted transverse sinus device	\$ 79,500.00
14	FY16	Multi-compartment Syringe for Endobronchial Ultrasound Transbronchial Needle Aspiration	\$ 666,000.00
15	FY16	Development of first-in-class TGR5 antagonists for the treatment of cholangiopathies	\$ 715,500.00
16	FY16	RGS Inhibition for Treatment of Obesity, Diabetes, NASH AND Cardiometabolomic Disorders	\$ 79,500.00
17	FY16	Vaccines to Combat Clostridium Difficile	\$ 79,500.00
18	FY16	Translational Development of a Targeted Cardiocerebral Extracorporeal Membrane Oxygenation (TC ECMO) System	\$ 77,000.00
19	FY16	Adult stem cell derived RPE for treatment of macular degeneration.	\$ 79,500.00
20	FY16	Studies of a molecular functional biomarker in Alzheimer's disease	\$ 991,665.00
21	FY16	Precision medicine of aromatase inhibitors in post-menopausal women with ER+ breast cancer	\$ 735,990.00
22	FY16	Robust connectome-based biomarkers of degenerating brain systems across the Alzheimer's disease spectrum	\$ 947,431.00
23	FY16	Genomic and Small Molecule Screens for Regulators of Liver Steatosis	\$ 623,919.00
24	FY16	13C-Pyruvate Magnetic Resonance Spectroscopy for Pancreatic Cancer Diagnostic Imaging	\$ 650,163.00
25	FY16	Testing susceptibility of 'dirty' mice to induction of asthmatic disease and lung pathology	\$ 996,803.00
26	FY17 BioMed	Development of Hexyl-Benzyl-Biguanide for Breast Cancer Therapeutics	\$ 616,000.00
27	FY17 BioMed	Micrometer: Next-generation Standards for Clinical Microbiome Analysis	\$ 220,000.00
28	FY17 BioMed	Fiber-optic Tube Thoracostomy Trocar for Improved Patient Chest Drainage	\$ 636,000.00
29	FY17 BioMed	Preclinical Development of Beta-hydroxybutyrate/Melatonin (BHB/M) for the Treatment of Trauma-induced Acute Blood Loss	\$ 616,000.00
30	FY17 BioMed	Improved Treatment of Tension Pneumothorax Decompression with Needle Thoracostomy Colorimetric Capnography	\$ 79,500.00
31	FY17 BioMed	Adult Stem cell derived RPE for treatment of macular degeneration	\$ 322,287.00
32	FY17 BioMed	A Novel Quantitative Micro-Miniature Intraoperative Monitor (QMIM) for Fetal Surgery	\$ 79,500.00
33	FY17 BioMed	Technical/Expert Support for BioMedicine Fund Projects	\$ 13,482.50
34	FY17	Development of personalized microbiome-based treatment for colorectal cancer	\$ 999,997.00
35	FY17	Astrocyte-derived extracellular vesicles: Epilepsy promoters, repressors and brain stimulation	\$ 1,000,000.00

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11	Legislated Year	Award Description	Funds Issued
36	FY17	Activation of Guanylyl Cyclase-B as a Novel Treatment for Osteoporosis	\$ 991,995.00
37	FY17	Targeting tau phosphorylation and missorting to treat Alzheimer's diseases	\$ 1,050,000.00
38	FY17	PET agents for in vivo imaging of bacterial infections	\$ 876,755.00
39	FY16-17	Fractional program support for FY16-17	\$ 269,818.00
40	FY18	RGS Inhibition for Treatment of Obesity, Diabetes, NASH AND Cardiometabolomic Disorders	\$ 397,500.00
41	FY18	Minimally Invasive Drainage of Subdural Hematomas	\$ 555,683.00
42	FY18	ConnectedNest - Demonstration in an Oncology Patient Population	\$ 201,705.00
43	FY18	Enhancing hearing using noninvasive bimodal neuromodulation with novel "Ampear Buds" technology	\$ 185,977.00
44	FY18	iPSC derived Cartilage Cells for Treatment of Osteoarthritis	\$ 155,000.00
45	FY18	Delivery optimization of MyoPaxon in non-human primates	\$ 193,749.00
46	FY18	Design, synthesis and preliminary evaluation of B-11 antibody fragments for PD-L1 PET imaging	\$ 250,000.00
47	FY18	Flexible Tube-Assist Balloon Dilator with Camera: Self-Dilation of Benign Esophageal Strictures	\$ 99,243.00
48	FY18	Angiotensin receptor blockers for novel SARS-CoV-2: A multicenter randomized control trial	\$ 773,946.00
49	FY18	Generation and immune protection of PD-L1 designer islets for the treatment of type 1 diabetes	\$ 1,237,082.00
50	FY18	Stress-Induced Exacerbation Of Senescence-Associated Diseases	\$ 1,007,306.00
51	FY18	Retinal Hyperspectral Imaging: A Tool for Early Detection of Alzheimer's Disease	\$ 750,000.00
52	FY18	Targeting the gut microbiome to prevent the increasing incidence of obesity	\$ 940,984.00
53	FY18	Defining parameters and performance specifications for an implantable CNS drug testing device	\$ 1,000,037.00
54	FY19	A Compliant Stent-graft to Lower Blood Pressure in Patients with Aortic Disease	\$ 65,985.00
55	FY19	Minimally Invasive Drainage of Subdural Hematomas	\$ 79,500.00
56	FY19	Translation of an APOBEC3B-modified vaccine, in combination with checkpoint inhibition, for the treatment of adult human, and companion animal canine, glioblastoma.	\$ 79,017.00
57	FY19	Peptide-Guided Delivery System to Improve Treatment for Pediatric Diffuse Intrinsic Pontine Gliomas	\$ 878,050.00
58	FY19	Mechanistic Dissection of the K27M Histone Mutation in Pediatric Gliomagenesis	\$ 953,419.00
59	FY19	Magnetic Nanodevice Arrays for the Treatment of Neurological Diseases	\$ 913,049.00
60	FY19	Overcoming Hormone Therapy Resistance in ER+HER2- Breast Cancer by Inhibition of Epoxyeicosatrienoic Acid Driven Signaling	\$ 976,651.00
61	FY19	Development of a High Throughput Label-Free Platform Integrating Electronic Nanosensors and Holographic Imaging for Pancreatic Cancer Early Detection	\$ 866,000.00
62	FY19	Innovative Methods to Detect and Characterize Senescent Cells	\$ 955,233.00
63	FY19	AI Assisted High-content Microscopic Image Analysis For Understanding Human Disease Processes	\$ 1,169,407.00
64	FY19	Development Of Vector Core For Adeno-Associated Virus Vectors Production and Pre-Clinical Toxicology Evaluation	\$ 669,452.00
65	FY18-19	Fractional program and award management for FY18-19	\$ 306,070.00
66	FY20	Multi-compartment Syringe for Endobronchial Ultrasound Transbronchial Needle Aspiration	\$ 529,802.00
67	FY20	Adult stem cell derived RPE for treatment of macular degeneration.	\$ 313,713.00
68	FY20	iPSC derived Cartilage Cells for Treatment of Osteoarthritis	\$ 387,523.00
69	FY20	Flexible Tube-Assist Balloon Dilator with Camera: Self-Dilation of Benign Esophageal Strictures	\$ 139,965.00
70	FY20	Novel Portable Device for the Treatment of Lymphedema	\$ 320,677.00
71	FY20	Development of a Novel Jugular Vein Cooling Catheter for Selective Brain Cooling for Neuroprotection	\$ 206,700.00

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11	Legislated Year	Award Description	Funds Issued
72	FY20	Fascial Closure Device	\$ 99,750.00
73	FY20	Epigenetic inhibitors for the treatment of alcoholic hepatitis	\$ 159,276.00
74	FY20	A Novel Quantitative Micro-Miniature Intraoperative Monitor (QMIM) for Fetal Surgery	\$ 159,000.00
75	FY20	Ambulatory Breathing Sensor To Analyze Ventilatory Pump Function	\$ 172,300.00
76	FY20	Purified exosome product/urethral delivery device as a novel platform to treat stress urinary incontinence	\$ 254,400.00
77	FY20	Rotator cuff regeneration using BMP5	\$ 158,367.00
78	FY20	Cryo-Facilitated Method for Transcatheter Removal of Tissue and Foreign Materials	\$ 171,720.00
79	FY20	Development of a Health Screening Tool Using the Gut Microbiome Health Index (GMHI)	\$ 55,222.00
80	FY20	Targeting TREM2 for the treatment of amyotrophic lateral sclerosis	\$ 95,402.00
81	FY20	New therapies for severe or fatal genetic disorders of metabolism	\$ 1,000,000.00
82	FY20	Developing Vaccination Regimens that Generate Multi-Functional, Long Lived, and Re-activatable B and T Cell Immunity for SARS-CoV-2	\$ 1,220,296.00
83	FY20	Tools to Assess DNMT-DNA Covalent Complex Formation	\$ 942,669.00
84	FY20	Dual Targeting of Aurora-A and Progesterone Receptor (PR) Driven Signaling Pathways to Enhance the Therapeutic Efficacy of CDK4/6 Inhibitors in Endocrine Resistant Breast Cancer	\$ 922,980.00
85	FY20	Development and Clinical Testing of Next Generation Oncolytic Viruses Against Spontaneous Malignant Melanomas in Companion Dogs	\$ 899,033.00
86	FY20	cGMP Synthesis of [68Ga]Ga-Bisphosphate for PET Imaging of Bacterial Infection over Inflammation in Osteomyelitis Foreign Body Rat Model	\$ 190,401.00
87	FY20	An Automated Microfluidic Device for Blood Analysis in Neonates	\$ 125,368.00
88	FY20	A first-in-human microperfusion system for in situ CNS discoveries	\$ 117,183.00
89	FY20	"Reliable Assessment of Rare but life-thrEating Atypical Infections (RARE-AI)"	\$ 97,914.00
90	FY20	Targeted Cardio-Cerebral ECMO (TC-ECMO)	\$ 653,283.00
91	FY21	ConnectedNest - Demonstration in an Oncology Patient Population	\$ 400,630.00
92	FY21	Flexible Tube-Assist Balloon Dilator with Camera: Self-Dilation of Benign Esophageal Strictures	\$ 77,230.00
93	FY21	Epigenetic inhibitors for the treatment of alcoholic hepatitis	\$ 79,486.00
94	FY21	Purified exosome product/urethral delivery device as a novel platform to treat stress urinary incontinence	\$ 298,590.00
95	FY21	Manipulating natural killer cell signaling to enhance immunotherapy	\$ 851,918.00
96	FY21	Lead Optimization of a Novel Epigenetic Inhibitor Series for Alcoholic Hepatitis Therapy	\$ 1,072,713.00
97	FY21	Novel Implementation of Spatiotemporal Mapping and Electroporation for the Treatment of Persistent Atrial Fibrillation	\$ 728,362.00
98	FY21	Unexplored pathways: the impact of abnormal glycosylation on the hypothalamic-pituitary-adrenal and -gonadal axes and bone health in patients with congenital disorders of glycosylation	\$ 614,569.00
99	FY21	An intraoperative stylet-based electrode array for mapping subcortical brain regions	\$ 1,331,564.00
100	FY21	"Reliable Assessment of Rare but life-thrEating Atypical Infections (RARE-AI)"	\$ 242,100.00
101	FY21	Engineered Memory T cells as a Platform to Treat Enzymopathies	\$ 308,524.00
102	FY21	Towards the development of a compact, silent, and affordable pediatric MRI system	\$ 152,000.00
103	FY21	Enhanced assessment of bone marrow pathology using a deep-learning-based virtual non-calcium technique in multi-energy computed tomography	\$ 127,416.00
104	FY21	A system that mimics the in utero environment to support development and survival of premature infants	\$ 116,833.00
105	FY21	Magnetic Particle Spectroscopy	\$ 187,240.00
106	FY21	Vascular Isolation and Perfusion for Ischemic Rescue (VIPER)	\$ 160,894.00

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11	Legislated Year	Award Description	Funds Issued
107	FY21	Lumbo-venous CSF Shunt for Treatment of Communicating Hydrocephalus	\$ 192,873.00
108	FY21	Development of a Semi-Automated Intraoperative Rod Bending Machine	\$ 133,010.00
109	FY21	Artificial Intelligence to Detect Sites of Autonomic Cardiac Innervation to Guide Ablation of Arrhythmias	\$ 116,624.00
110	FY21	ADAMs Inhibition to Overcome Prostate Cancer Stockholm Syndrome	\$ 69,321.00
111	FY21	Vacuum Assisted Electroporation to Treat Anastomotic Leaks	\$ 138,791.00
112	FY21	A better transfer catheter to improve in vitro fertilization procedures	\$ 193,485.00
113	FY21	Mechanical Percutaneous Septal Myectomy Device	\$ 40,350.00
114	FY21	Detection of high-copy number tumor-specific chromosomal rearrangements in circulating-free DNA from the plasma of high-grade glioma patients	\$ 51,648.00
115	FY21	Reposition of glembatumumab to reverse cardiac dysfunction in anthracycline-induced cardiotoxicity	\$ 80,550.00
116	FY21	Novel antibody-based therapeutic for the treatment of anti-platelet factor 4 (PF4) mediated thrombotic syndromes	\$ 182,234.00
117	FY21	Flap Valve Creation and Augmentation for Gastroesophageal Reflux Disease Management (GERD Flap)	\$ 150,401.00
118	FY21	Novel Drugs for management of diabetes	\$ 192,197.00
119	FY21	Emergence-360TM (E-360) profiles from clinical-grade multi-omic data	\$ 179,955.00
120	FY21	Image-guided Focused Ultrasound Nerve Stimulation and Ablation System	\$ 165,188.00
121	FY21	Enhancement of electromechanical coupling to optimize delivery of implantable cardioverter defibrillator (ICD) therapies	\$ 56,679.00
122	FY21	Threonine Tyrosine Kinase (TTK) Inhibitors To Treat TP53-Mutated Myeloid Neoplasms	\$ 80,700.00
123	FY21	Developing a novel therapeutic for infant respiratory distress syndrome	\$ 106,300.00
124	FY21	Antisense Targeting AR mRNA Polyadenylation to Block Expression of AR Variants	\$ 192,170.00
125	FY21	Development of a Contamination-Resistant (CR) Administration System for Reducing Infection Risks in Continuous Ambulatory Peritoneal Dialysis (CAPD)	\$ 321,811.00
126	FY21	A Microfluidic Diagnostic for the ICU (Sepsis)	\$ 40,350.00
127	FY21	Targeting metastatic solid cancers using next-generation tumor infiltrating lymphocytes	\$ 308,000.00
128	FY20-21	Fractional program and award management for FY20-21	\$ 368,476.00
129	FY22	Targeting CD103 with engineered cell therapy for the treatment of GVHD	\$ 1,500,000.00
130	FY22	ENTRUST AI: ENSuring the TRUSTworthiness of AI/ML Models to Optimize Continual Patient Safety	\$ 1,400,000.00
131	FY22	Minnesota Precision Neuromodulation Center (MinPeNCe)	\$ 2,926,136.00
132	FY22	An essential role for complement signaling in microglia on diet-induced hypothalamic neuroinflammation, neurodegeneration and aging-associated cognitive impairment	\$ 750,000.00
133	FY22	Macrophage networks and checkpoints in cardiovascular disease	\$ 750,000.00
134	FY23	Center for Functional Genomics of Immunotherapy (CFG-I)	\$ 1,500,000.00
135	FY23	The Healthy Aging in the Senior Years (HATS) Study: Cardiovascular Contributions to Brain Health and Dementia	\$ 1,500,000.00
136	FY23	Organoid Biomanufacturing for Transforming Healthcare	\$ 1,500,000.00
137	FY23	Towards a Center for Advanced Synucleinopathy Diagnostics (ASCEND): Development and optimization of nanoparticle-enhanced seed amplification assays for blood-based detection of synucleinopathies	\$ 1,500,000.00
138	FY23	Minnesota Functional Omics Resource (MNFORce)	\$ 750,000.00
139	FY23	Identifying T cell subsets contributing to immune related adverse events caused by immunotherapy	\$ 750,000.00
140	FY22-23	Fractional program and award management support for FY22-23	\$ 337,691.00
141	FY24	Pre-aligned muscle tissues to facilitate regenerative therapy development	\$ 154,008.00

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11	Legislated Year	Award Description	Funds Issued
142	FY24	Disruptive ultrasound hearing aid technology: Prototype development and usability/tolerability testing	\$ 319,279.00
143	FY24	Translating Sts inhibitors into immune-enhancing antimicrobial therapies	\$ 143,844.00
144	FY24	Novel Hybrid Distal Access Catheter With Microcatheter Extension System for the Treatment of Acute Ischemic Stroke	\$ 80,539.00
145	FY24	Targeted therapies in porcine tumor models of diffuse intrinsic pontine glioma	\$ 80,700.00
146	FY24	Development of a Pulsed Field Ablation Wire for Neuroendovascular Ablation	\$ 79,086.00
147	FY24	Intraoperative Minibeam Radiation Therapy (IOMBRT): An Innovative Approach for Unresectable Pancreatic Cancer	\$ 58,738.00
148	FY24	Lower Extremity Extracorporeal Distal Revascularization (LEEDR) as a Novel Therapy for Peripheral Vascular Disease	\$ 79,519.00
149	FY24	Development of an O'PROTAC to target C/EBPα	\$ 147,358.00
150	FY24	Near silent MRI with novel predictive noise cancellation*	\$ 104,122.00
151	FY24	Understanding Endothelial-to-Mesenchymal Transition (EndMT) in Vascular Remodeling of Pulmonary Hypertension	\$ 750,000.00
152	FY24	Device to Add Compliance to the Vascular System to Treat Refractory Hypertension due to Aortic Stiffness - Design for Manufacturability*	\$ 167,592.00
153	FY24	Improving Lower Limb Prostheses through Novel Parametric Prosthesis Foot-Shoe System*	\$ 77,899.00
154	FY24	Development of Clinical Grade RF Encoding MRI Methodologies for Compact and Inhomogeneous Magnets V3*	\$ 115,500.00
155	FY24	Subtraction Radiography: Next-generation on-board imaging for radiotherapy*	\$ 293,384.00
156	FY24	Fractional program and award management for FY24**	\$ 274,515.00
157	FY24	Allocated for funding pending applications in FY24	\$ 5,700,000.00
158	FY25	Allocated to FY25 funding cycle (pending receipt in UMN FY26 - July 1, 2025)	\$ 7,991,000.00
159	FY16-25		\$ 82,054,127.50
160	*December 2024 awards in budget finalization; final totals subject to change **Less than 2% of the Partnership budget has been utilized for program and award management. UMN and Mayo in-kind contributions of staff and faculty time offset the total costs of administering this program.		