

# List of Current Research Projects Funded by the National MS Society

Sorted by State/Country

November 2023

Research Department National Multiple Sclerosis Society New York, NY

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#### Introduction

The National MS Society invests in promising research to drive <u>Pathways to Cures</u> that will stop MS, restore function and end MS forever. We manage an international portfolio of academic and commercial research projects, train the next generation of scientists and MS specialists, and foster global collaboration between MS researchers and funders.

This document lists MS research projects being funded by the National Multiple Sclerosis Society (USA), sorted by state and country, as of November 1, 2023.

#### Notes:

- 1) Some listed projects have indications of restricted support that has been provided by donors and other friends of the Society. These are listed in italic typeface directly beneath the project title.
- 2) This list is not an official record and any errors do not reflect official changes to research award agreements. Some grants listed here do not have final signed agreements.

**TBD** = to be determined

# Research Priorities: Pathways to Multiple Sclerosis Cures

The National MS Society is focused on achieving breakthroughs to cures for multiple sclerosis. Our progress will be hastened with a roadmap that describes the knowledge gaps, milestones and research priorities that will lead to cures for everyone living with MS. The roadmap was developed in consultation with scientific experts, health care providers and people affected by MS. We believe the <a href="Pathways to Cures Roadmap">Pathways to Cures Roadmap</a> will inspire the alignment of global resources on the most pressing questions in MS research and accelerate scientific breakthroughs that lead to cures for everyone living with MS.

The Roadmap includes three Pathways: STOPPING MS disease activity, RESTORING function by reversing damage and symptoms, and ENDING MS by preventing new cases. Research proposals should address critical knowledge gaps in our understanding of the roadmap. Many gaps apply to more than one pathway.

# **Goal 1: STOP pathway**

Stopping MS is defined as achieving a state of no new disease activity, no worsening of daily living or quality of life, and no change in disease manifestations or clinical activity in people living with either relapsing or progressive forms of MS. Understanding disease heterogeneity across diverse populations of people with all forms of MS over time is important to stopping disease activity and protecting the central nervous system from further assault, and to create a permissive environment for myelin repair and other restoration efforts.

Target areas include **Early Detection**: Reduce or eliminate the impact of MS before neurological deficits accumulate *in an individual with MS*, and **Precision Medicine**: Achieve no worsening of daily living or quality of life, and no change in disease manifestations, *for each individual with MS*.

# Goal 2: <u>RESTORE Pathway</u> -- reverse symptoms, and recover function to enable full participation in society

MS can result in many different symptoms, including vision loss, pain, fatigue, sensory loss, impaired coordination, mobility, and cognitive and mood changes. Symptom severity and duration varies from person to person. Historically, rehabilitation aims to improve symptoms, with medical management

of the disease kept separate. There is data supporting the idea that restoration of function, not only symptom management, is possible in MS.

Target areas include **Regeneration**: Improve or enhance tissue repair/regeneration to reverse or slow MS progression and improve symptoms, and **Restoration of Activity**: Advance implementation of rehabilitation and symptom management strategies to restore function, reverse symptoms and enhance quality of life.

# Goal 3: **END Pathway** -- No new cases of MS (prevention)

Ending MS is defined as no new cases of MS. Preventing new cases of MS will require population-based public health initiatives and individual-based interventions. While efforts will be made to advance both targets, a focus on Secondary Prevention could potentially lead to the development of approaches with benefits for people living with MS in the near term.

Target areas include **Primary prevention**: To prevent MS before it occurs by limiting exposure to MS risk factors *in the general population*, and **Secondary prevention**: To reduce or eliminate the impact of MS before onset of signs/symptoms by identifying pre-clinical MS *in the high-risk population*.

# **About Our Research Projects**

The Society offers a spectrum of funding opportunities and resources to support MS investigators at virtually every stage of their careers. These include:

- **Biostatistics/Informatics Junior Faculty Awards** supported by the Marilyn Hilton MS Research Fund, these awards create protected time to collaborate with an established MS research group to develop expertise in MS clinical trials and other data analysis
- **Career Transition Fellowships** awards up to 5 years to facilitate the advancement of promising young investigators into full faculty positions
- **Clinician Scientist Development Award** -- to train physicians in MS clinical research. Some of these are co-supported by the American Brain Foundation (ABF)
- **Fast Forward** Commercial and academic partnerships aimed at specific strategies to drive the discovery of new therapies for people with MS
- **Harry Weaver Neuroscience Scholarships** special 5-year projects by promising young investigators just starting their careers as independent researchers
- **Health Care Delivery & Policy Contracts** initiated by the Society and awarded on a competitive basis to investigators studying subjects identified as mission priorities
- International Progressive MS Alliance projects jointly funded by Alliance members; Read more
- Mentor-based Postdoctoral Rehabilitation Fellowships to enhance research into MS rehabilitation to improve quality of life
- Postdoctoral Fellowships research projects by young investigators working under the mentorship of senior scientists, to provide training in MS research
- Research Grants full grants for basic, clinical and rehabilitation research
- RFA research projects targeted to specific Pathways to Cures priorities
- **Strategic Initiatives** special projects that focus on core resources or other important unmet research needs
- **Sylvia Lawry Physician Fellowships** young doctors working under the mentorship of seasoned clinicians, to provide training and experience in conducting clinical trials in people with MS

# About Research "Categories"

This list includes the category, or the general type of research a specific project entails.

- **Biochem./Biophysics** Understanding basic cell processes to enhance knowledge of factors underlying MS
- **Biology of Glia/Myelin** Investigating how myelin is formed and the role played by oligodendrocytes and other nervous system support cells in MS
- CNS Repair Searching for ways to stop and reverse tissue damage in MS
- **Diagnostic Methods** Investigating ways to improve the detection and diagnosis of MS
- **Epidemiology** Investigating who gets MS in search of the cause and risk/ protective factors
- **Health Care Delivery/ Policy** Studying how people with MS utilize health-care services and how health-care delivery can be improved
- **Human Genetics** Searching for genes that make people susceptible to MS or otherwise influence the disease, for clues to its cause, prevention and better treatment
- **Human Therapy Trials/Management of MS** Investigations into treatments for all forms of MS, and training physicians in MS clinical research and trials
- Immunology Exploring the role of the immune system in the development and progression of MS to find ways to stop the immune attack on nervous tissues
- **Infectious Triggers** Examining the possibility that viruses or bacteria could act as disease triggers in MS
- Measuring MS Disease Activity Using sophisticated tools to track MS activity over time
- Neuropathology Exploring how nerve fibers and cells are damaged during the course of MS
- **Neuropharmacology** Studying how potential therapies impact the nervous system
- Neurophysiology Exploring how nerve fibers and cells work normally and in the disease state
- Physiology Understanding how MS may impact functions of the body
- **Preclinical Drug Development** Laboratory research to collect data needed before an experimental therapy can be tested in people
- **Psychosocial Aspects of MS** Understanding how MS effects cognitive functioning and other aspects of quality of life and wellness
- **Rehabilitation** Seeking ways to maximize physical and mental abilities and reduce symptoms and increase wellbeing
- Tissue/DNA Banks Shared resource of tissues and DNA banks that accumulate and store specimens for use by MS investigators

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# WITHIN THE UNITED STATES

**ARIZONA** 

Claudia Cantoni, Ph.D.

St. Joseph's Hospital and Medical Center, Barrow

Neurological Institute Phoenix, Arizona

Award: Career Transition Fellowships

Term: 9/1/2022-6/30/2024

"MiR-223: a new potential therapeutic target to modulate myeloid cells in multiple sclerosis"

Researchers at Washington University are exploring the possibility that a subset of immune cells in the blood may be impaired in MS, for clues to how these cells might be manipulated to suppress disease activity.

Pathway to Cures: Stopping MS

Category: Immunology

Approx. Funding: \$273,341

Richard Dortch, Ph.D.

St. Joseph's Hospital and Medical Center, Barrow Pathway to Cures: Restoring Function

Neurological Institute Category: CNS Repair
Phoenix, Arizona Approx. Funding: \$600,000

Award: Research Grants Term: 5/1/2022-4/30/2025

"Turnkey MRI Biomarkers of Myelin Repair" Barrow Neurological Institute researchers are developing a more sensitive and specific method of measuring nerve-insulating myelin and its repair using MRI.

**CALIFORNIA** 

Christina Azevedo, M.D., M.P.H.

Pathway to Cures: Stopping MS
Category: Measuring MS Disease

University of Southern California

Category: Measuring MS Disease Activity

Approx. Funding: \$747,267

Los Angeles, California

Award: Harry Weaver Scholar Awards

Term: 7/1/2021-6/30/2026

"Understanding Mechanisms of Deep Grey Matter Injury Using MRI in Patients with MS"

Researchers at the University of Southern California are using advanced imaging techniques to better understand the damage that occurs in MS for clues to stopping it.

Paid by the Marilyn Hilton MS Research Fund

Christopher Orlando, M.D., M.P.H.

University of Southern California Pathway to Cures: Stopping MS

Los Angeles, California Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2023-6/30/2025 Approx. Funding: \$150,000

"Underserved Populations and Clinical Trials" A promising doctor at University of Southern California will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Pascal Sati, Ph.D.

Cedars-Sinai Medical Center

Los Angeles, California

Award: Research Grants

Pathway to Cures: Stopping MS

Category: Diagnostic Methods

Approx. Funding: \$590,331

Term: 5/1/2022-4/30/2025

"Evaluation of Paramagnetic Rim Lesions for Early and Precise Detection of Multiple Sclerosis" A team at Cedars-Sinai Medical Center is evaluating MRI methods to more accurately diagnose MS.

Paid by the Marilyn Hilton MS Research Fund

# Seema Tiwari-Woodruff, Ph.D.

University of California, Riverside
Riverside, California
Category: Neuropathology
Award: Research Grants
Approx. Funding: \$456,500

Term: 5/1/2022-4/30/2025

"Purkinje Neuron Mitochondrial Dynamics in the Demyelinating Cerebellum" Researchers at the University of California, Riverside are studying how inflammation affects energy sources of nerve cells and testing drugs in mice to find possible solutions.

Funded in full by the Guston Fund

#### Seema Tiwari-Woodruff, Ph.D.

University of California, Riverside Pathway to Cures: Restoring Function

Riverside, California Category: CNS Repair
Award: Research Grants Approx. Funding: \$589,500

Term: 4/1/2023-3/31/2026

"Functional recovery of Visual Pathway by modulating inflammation, inducing remyelination, and mitigating axon damage." Researchers at University of California, Riverside are exploring how one molecule may contribute to nerve damage in MS for clues to restoring function.

Funded in part by the Kaufer Family

# Seema Tiwari-Woodruff, Ph.D.

University of California, Riverside Pathway to Cures: Restoring Function Riverside, California Category: Preclinical Drug Development Award: Fast Forward Approx. Funding: \$373,446

Term: 7/15/2020-12/31/2023

"Remyelination and Immunomodulation with analogues of Chloroindazole" Research performed at the University of California, Riverside is focused on the role of Estrogen Receptor beta  $(ER\beta)$  selective compounds on promoting remyelination in MS.

#### Jennifer Graves, M.D., Ph.D.

University of California San Diego
Pathway to Cures: Stopping MS
San Diego, California
Category: Epidemiology
Award: Research Grants
Approx. Funding: \$630,871

Term: 4/1/2023-3/31/2026

**"Biological Age in the Pediatric MS Population"** A team at the University of California, San Diego is studying aging in children with and without MS for clues to stopping the effects of aging on the course of MS.

#### Valerie Block, D.Sc., P.T.

University of California, San Francisco
Pathway to Cures: Restoring Function
San Francisco, California
Category: Measuring MS Disease Activity
Award: Career Transition Fellowships
Approx. Funding: \$591,128

Term: 7/1/2021-6/30/2026

"Moving MS bladder dysfunction into the 21st Century: developing novel and accessible ways to treat, predict and prevent dysfunction in the home" A UCSF team is developing a solution for bladder problems in people with MS.

Paid by the Marilyn Hilton MS Research Fund

#### Riley Bove, M.D.

University of California, San Francisco

Pathway to Cures: Restoring Function

San Francisco, California Category: Human Therapy Trials/Management

Award: Harry Weaver Scholar Awards of MS

Term: 7/1/2020-6/30/2025 Approx. Funding: \$708,972

"Trials for remyelination in MS: from bench to bedside to home" UCSF researchers are testing a novel molecule that may repair myelin in women with MS ages 45-60, using a home-based trial that employs digital tools to measure improvements during the study.

Paid by the Marilyn Hilton MS Research Fund

# Stephen Fancy, D.V.M., Ph.D.

University of California, San Francisco

Pathway to Cures: Restoring Function

San Francisco, California Category: Biology of Glia Award: Harry Weaver Scholar Awards Approx. Funding: \$776,123

Term: 7/1/2017-6/30/2024

# "Oligodendroglial-vascular interactions control successful remyelination in Multiple Sclerosis"

Researchers from the University of California at San Francisco are exploring interactions between blood vessels and myelin-making cells for clues to promoting myelin repair in MS.

Funded in part by the Dave Tomlinson Research Fund

# Josiah Gerdts, M.D., Ph.D.

University of California, San Francisco

Pathway to Cures: Stopping MS

San Francisco, California Category: Immunology Award: Career Transition Fellowships Approx. Funding: \$451,281

Term: 7/1/2023-6/30/2028

"An engineered immune synapse detection circuit for T cell antigen discovery in autoimmune neurologic disorders" Researchers at UCSF are developing a technology to better identify the triggers that cause immune cells to attack the nervous system in MS and other disorders.

#### Qin Ma, Ph.D.

University of California, San Francisco

Pathway to Cures: Stopping MS

San Francisco, California

Category: Immunology

Award: Postdoctoral Fellowships

Approx. Funding: \$215,095

Term: 7/1/2022-6/30/2025

"Integrated B cells epigenetic and transcriptome analysis in multiple sclerosis" UCSF researchers are investigating genetic changes in immune B cells from people with MS compared to people without MS for clues to stopping MS.

#### Carson Moseley, M.D., Ph.D.

University of California, San Francisco

Pathway to Cures: Stopping MS

San Francisco, California Category: Immunology Award: Clinician Scientist Development Awards Approx. Funding: \$222,114

Term: 7/1/2022-6/30/2025

"Mechanistic studies of MOG-specific CD4+ T cell differentiation in MOGAD" A team at the University of California, San Francisco is investigating the role of immune T cells and B cells and their interaction in attacks on myelin.

# Alyssa Nylander, M.D., Ph.D.

University of California, San Francisco

Pathway to Cures: Restoring Function

San Francisco, California

Category: CNS Repair

Award: Clinician Scientist Development Awards

Approx. Funding: \$150,445

Term: 7/1/2022-6/30/2024

"Cognition as a meaningful, quantitative outcome for myelin repair: establishing a translational approach for advancing from preclinical assessments to clinical trials" UCSF researchers are exploring the relationship between myelin repair and cognitive ability in people with MS and mouse models of the disease.

# Jorge Oksenberg, Ph.D.

University of California, San Francisco
Pathway to Cures: Ending MS
San Francisco, California
Category: Tissue/DNA Banks
Award: Strategic Initiatives
Approx. Funding: \$1,552,809

Term: 10/1/2020-9/30/2026

**"Establishment of a core DNA repository for multiple sclerosis"** Researchers at the University of California, San Francisco are maintaining and enhancing a blood biospecimen bank as a shared resource to identify genetic variants and other factors that contribute to risk and genetic susceptibility in MS

#### Joseph Sabatino, M.D., Ph.D.

University of California, San Francisco
Pathway to Cures: Ending MS
San Francisco, California
Category: Immunology
Award: Role of Viruses RFA - 2023
Approx. Funding: \$110,000

Term: 10/1/2023-9/30/2024

"Identification of viral-specific lymphocytes associated with novel autoantibody signature in multiple sclerosis" A team at UCSF is exploring a possible mechanism by which EBV may trigger the immune response that damages the nervous system in people with MS.

# Joseph Sabatino, M.D., Ph.D.

University of California, San Francisco
Pathway to Cures: Ending MS
San Francisco, California
Category: Immunology
Award: Research Grants
Approx. Funding: \$584,536

Term: 5/1/2022-4/30/2025

"Antigen specificity and cross-reactivity of clonally expanded CD8+ T cells in multiple sclerosis" A team at the University of California, San Francisco is determining the targets recognized by immune cells in the spinal fluid of people with MS for clues to what triggers MS.

#### Erin Gibson, Ph.D.

Stanford University Pathway to Cures: Stopping MS
Stanford, California Category: Biology of Glia
Award: Research Grants Approx. Funding: \$586,601

Term: 4/1/2023-3/31/2026

"Targeting circadian mechanisms of degeneration in myelin disorder" Stanford scientists are exploring whether alterations in circadian rhythms in MS-like disease contributes to a failure in the natural capacity for myelin repair.

# Theodore Jardetzky, Ph.D.

Stanford University Pathway to Cures: Ending MS
Stanford, California Category: Infectious Agents
Award: Role of Viruses RFA - 2023 Approx. Funding: \$78,753

Term: 10/1/2023-9/30/2024

"Isolation of antibodies to prefusion EBV gB using humanized mice" Stanford University researchers are attempting to find antibodies that can block virus infection.

# Theodore Jardetzky, Ph.D.

Stanford University
Pathway to Cures: Ending MS
Stanford, California
Category: Infectious Agents
Award: Research Grants
Approx. Funding: \$571,058

Term: 4/1/2023-3/31/2026

"Targeting EBV entry glycoproteins for vaccine and therapeutic development" Stanford scientists are exploring novel technology with an eye toward developing a vaccine that may prevent the Epstein-Barr virus from triggering MS.

# Danwei Wu, M.D.

Stanford University Pathway to Cures: Stopping MS

Stanford, California Category: Preclinical Drug Development

Award: NMSS-ABF MS Clinician Scientist Award Approx. Funding: \$301,086

Term: 7/1/2023-6/30/2026

"Targeting CNS myeloid population through bone marrow transplantation in EAE mouse model" Stanford researchers are investigating aspects of bone marrow transplant in mice to enhance its ability to protect the nervous system and slow progression.

ABF Recipient, supported by the Kenrose Kitchen Table Foundation and J. David Power, III

#### **COLORADO**

Roger Enoka, Ph.D.

Pathway to Cures: Restoring Function

Catagory: Palabilitation

University of Colorado - Boulder
Boulder, Colorado
Boulder, Colorado

Category: Rehabilitation
Approx. Funding: \$589,208

Award: Research Grants Term: 4/1/2023-3/31/2026

"Reducing fatigue in people with MS by treatment with transcutaneous electrical nerve stimulation"

A team at the University of Colorado is testing whether electrical nerve stimulation can reduce fatigue in a clinical trial involving people with MS.

#### John Corboy, M.D.

University of Colorado Denver
Pathway to Cures: Ending MS
Denver, Colorado
Category: Tissue/DNA Banks
Award: Strategic Initiatives
Approx. Funding: \$1,407,349

Term: 10/1/2020-9/30/2027

"Rocky Mountain MS Center Tissue Bank" Maintaining a tissue bank of specimens from people with MS for use in research.

#### Gustavo Della Flora Nunes, Ph.D.

University of Colorado Denver Pathway to Cures: Restoring Function

Denver, Colorado Category: Neurophysiology Award: Postdoctoral Fellowships Approx. Funding: \$194,116

Term: 7/1/2022-6/30/2025

"The role of remyelination in restoration of neural function and motor behavior" University of Colorado researchers are investigating whether the repair of nerve-insulating myelin leads to recovery of physical functions.

#### Wendy Macklin, Ph.D.

University of Colorado Denver Pathway to Cures: Restoring Function

Denver, Colorado

Category: CNS Repair

Award: Research Grants

Approx. Funding: \$599,999

Term: 5/1/2022-4/30/2025

"Impact of recombinant MS antibodies on remyelination" University of Colorado scientists are investigating the role of antibodies that may block myelin repair in people with MS.

# Lindsay Osso, Ph.D.

University of Colorado Denver Pathway to Cures: Restoring Function

Denver, Colorado Category: CNS Repair
Award: Postdoctoral Fellowships Approx. Funding: \$68,588

Term: 8/1/2025-8/1/2026

"Determining the mechanisms underlying remyelination by surviving oligodendrocytes" University of Colorado researchers are investigating how myelin-building cells that survive attacks can contribute to the repair of myelin, the protective nerve coating that is damaged in MS.

# Teri Schreiner, M.D., M.P.H.

University of Colorado Denver

Denver, Colorado

Award: Early Detection RFA - Spring 2021

Pathway to Cures: Stopping MS

Category: Diagnostic Methods

Approx. Funding: \$329,996

Term: 10/1/2021-9/30/2024

**"Detection and Risk in Earliest MS"** University of Colorado researchers are examining close family members of people with MS in search of early evidence and risk factors that could be combined to predict the future onset of MS.

Paid by the Marilyn Hilton MS Research Fund

#### Brett Fling, Ph.D.

Colorado State University Pathway to Cures: Restoring Function

Fort Collins, Colorado Category: Rehabilitation
Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$497,901

Term: 7/1/2023-6/30/2028

"From bench to bedside - mobility control and neurorehabilitation in people with multiple sclerosis" Experienced mentors/researchers at Colorado State University are training promising professionals to conduct MS rehabilitation research.

# Brett Fling, Ph.D.

Colorado State University Pathway to Cures: Restoring Function

Fort Collins, Colorado Category: Rehabilitation
Award: Harry Weaver Scholar Awards Approx. Funding: \$752,710

Term: 7/1/2020-6/30/2025

"Split-belt treadmill training in the lab and sensory cueing in the real world to reduce limb asymmetries and improve gait" Colorado State specialists are studying whether a rehabilitation program that specifically addresses asymmetries that may exist between legs can improve walking in people with MS.

# CONNECTICUT

Elizabeth Gromisch, Ph.D.

Pathway to Cures: Restoring Function
Category: Rehabilitation

Mount Sinai Rehabilitation Hospital
Hartford, Connecticut

Category: Rehabilitation
Approx. Funding: \$700,736

Award: Harry Weaver Scholar Awards

Term: 7/1/2021-6/30/2026

"Development and Feasibility of a Fatigue Self-Management mHealth Program for Persons with Multiple Sclerosis" Researchers at Mount Sinai Rehabilitation Hospital

are testing a program that may reduce the devastating effects of MS-related fatigue.

# Oksana Goroshchuk, M.D., Ph.D.

Yale University Pathway to Cures: Stopping MS

New Haven, Connecticut Category: Immunology
Award: Postdoctoral Fellowships Approx. Funding: \$201,903

Term: 7/1/2022-6/30/2025

"Sex differences in multiple sclerosis" A Yale team is researching changes to immune cells related to male and female sex hormones and genetic differences to understand sex differences in MS.

#### Kevan Herold, M.D.

Yale University Pathway to Cures: Stopping MS
New Haven, Connecticut Category: Immunology
Award: Strategic Initiatives Approx. Funding: \$356,224

Term: 2/1/2021-1/31/2024

"Analysis of antigen specific T cells in response to immune therapies in MS and T1D" Exploring how therapies for MS and Type 1 diabetes change immune cells and searching for blood markers to track disease development.

#### Erin Longbrake, M.D., Ph.D.

Yale University

Pathway to Cures: Ending MS

New Haven, Connecticut

Award: Role of Viruses RFA - 2023

Pathway to Cures: Ending MS

Category: Infectious Agents

Approx. Funding: \$110,000

Term: 10/1/2023-9/30/2024

"Epstein-Barr Virus in Patients with New Onset Multiple Sclerosis" Yale University scientists are exploring tissue obtained from people newly diagnosed with MS to determine what role EBV plays in activating the immune response in MS.

#### Naila Makhani, M.D., M.P.H.

Yale UniversityPathway to Cures: Ending MSNew Haven, ConnecticutCategory: EpidemiologyAward: Harry Weaver Scholar AwardsApprox. Funding: \$604,695

Term: 7/1/2023-6/30/2027

"Biomarkers Associated with Multiple Sclerosis in Children with Radiologically Isolated Syndrome"

A team at Yale University is investigating which children with unexpected abnormalities on brain scans to

better predict who are most likely to develop MS.

Paid by the Marilyn Hilton MS Research Fund

# David Pitt, M.D.

Yale University
Pathway to Cures: Stopping MS
New Haven, Connecticut
Category: Tissue/DNA Banks
Award: Strategic Initiatives
Approx. Funding: \$699,699

Term: 10/1/2020-9/30/2027

"National Multiple Sclerosis Tissue Repository Network (Award 2 of 3)" Developing and maintaining a tissue bank of specimens from people with MS for use in research.

# David Pitt, M.D.

Yale University

New Haven, Connecticut

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$634,841

Term: 10/1/2022-9/30/2025

"Astrocyte network disruption in perilesional white matter is mediated by adenosine A2A receptors and contributes to multiple sclerosis progression." Yale University scientists are investigating a docking protein on brain support cells called astrocytes and whether it plays a role in MS progression. Paid by the Marilyn Hilton MS Research Fund

#### Tomokazu Sumida, M.D., Ph.D.

Yale University Pathway to Cures: Stopping MS

New Haven, Connecticut

Category: Immunology

Award: Harry Weaver Scholar Awards

Approx. Funding: \$624,378

Term: 7/1/2023-6/30/2028

"Pathogenic Programs Driving Regulatory T Cell Dysfunction in Multiple Sclerosis" Yale researchers are working to find what causes immune cells to enter and attack the nervous system in MS.

#### Soumya Yandamuri, Ph.D.

Yale University Pathway to Cures: Stopping MS

New Haven, Connecticut Category: Immunology Award: Postdoctoral Fellowships Approx. Funding: \$193,789

Term: 7/1/2021-6/30/2024

"Isolation and characterization of myelin oligodendrocyte glycoprotein monoclonal antibodies" Researchers at Yale are exploring a mechanism for the damage that occurs to nerve-insulating myelin in MS.

# DISTRICT OF COLUMBIA

Jeffrey Huang, Ph.D.

Georgetown University

Washington, District of Columbia Award: Harry Weaver Scholar Awards

Term: 7/1/2019-6/30/2024

"Amino acid induced microglia/macrophage-OPC crosstalk in CNS remyelination" A Georgetown team is exploring the role of a specific molecule that appears to be very active when myelin damage occurs, for clues to developing a strategy that curtails its activity and promotes myelin repair.

Funded in part by the Al Otaiba Family

# **FLORIDA**

Sumire Sato, Ph.D., P.T.

University of Florida Gainesville, Florida

Award: Postdoctoral Fellowships Term: 7/1/2023-6/30/2026 Pathway to Cures: Restoring Function

Pathway to Cures: Restoring Function

Category: CNS Repair

Approx. Funding: \$758,839

Category: Neurophysiology Approx. Funding: \$200,689

"Identifying brain biomarkers in MS walking function to enhance rehabilitation outcomes: examining brain white matter after accounting for "free-water" fluid" Researchers at the University of Florida are focusing on using MRI imaging to understand how mobility declines with age and in people with MS.

# John Ciotti, M.D.

University of South Florida

Tampa, Florida

Award: Sylvia Lawry Physician Fellowships

Term: 4/1/2022-3/31/2024

Pathway to Cures: Stopping MS

Category: Human Therapy Trials/Management

of MS

Approx. Funding: \$65,000

**"Sylvia Lawry Physician Fellowship"** A promising doctor will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

#### **ILLINOIS**

Chung-Yi Chiu, Ph.D.

University of Illinois at Urbana-Champaign

Champaign, Illinois Award: Research Grants

Term: 4/1/2018-3/31/2024

Pathway to Cures: Restoring Function

Category: Rehabilitation Approx. Funding: \$548,359

"Developing A Person-centered Internet-based Health Action Process Approach to Promoting Physical Activity in People with Multiple Sclerosis" Researchers at the University of Illinois are testing a program aimed at increasing physical activity among people with MS to promote healthier lifestyles. Funded with support from the Illinois Lottery

#### Yanan Chen, M.D., Ph.D.

Loyola University - Chicago

Chicago, Illinois Award: Career Transition Fellowships

Term: 1/1/2023-12/31/2025

Pathway to Cures: Stopping MS

Category: CNS Repair Approx. Funding: \$412,500

# "Enhancing the unfolded protein response as a protective therapy for multiple sclerosis"

Northwestern scientists are exploring a novel strategy for protecting myelin-making cells and promoting myelin preservation and repair in MS.

Funded with support from the Illinois Lottery

#### Douglas Feinstein, Ph.D.

University of Illinois at Chicago Pathway to Cures: Restoring Function Chicago, Illinois Category: Preclinical Drug Development

Award: Research Grants Approx. Funding: \$599,524

Term: 5/1/2022-4/30/2025

"Accelerating remyelination with lanthionine ketimine" A team at the University of Illinois at Chicago is testing a compound in mice for its potential for increasing myelin repair in people with MS. Funded with support from the Illinois Lottery

#### Robert Motl, Ph.D.

University of Illinois at Chicago Pathway to Cures: Restoring Function

Chicago, Illinois Category: Rehabilitation
Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$395,037

Term: 11/1/2021-3/31/2026

"Training in Physical Activity Promotion for Multiple Sclerosis" Rehabilitation researchers have received funding to train promising rehabilitation professionals to conduct MS rehabilitation research. Paid by the Marilyn Hilton MS Research Fund

#### Robert Motl, Ph.D.

University of Illinois at Chicago Pathway to Cures: Restoring Function

Chicago, Illinois Category: Rehabilitation
Award: Collaborative Research Center Awards Approx. Funding: \$518,566

Term: 5/1/2022-4/30/2025

# "Healthy Aging through LifesTyle in Multiple Sclerosis: The HALT MS Research Center"

Researchers have joined together to stimulate interdisciplinary research on lifestyle and wellness for healthy aging in MS.

Funded with support from the Illinois Lottery

#### Vaibhav Patil, Ph.D.

Northwestern University Pathway to Cures: Restoring Function

Evanston, Illinois Category: Biology of Glia Award: Postdoctoral Fellowships Approx. Funding: \$205,470

Term: 7/1/2025-6/30/2026

"Role of m6A mRNA methylation in CNS remyelination and inflammation" Northwestern University scientists are working to expand the possibilities for repairing myelin, the protective nerve coating that is damaged in MS.

# **INDIANA**

Katrina Adams, Ph.D.

Pathway to Cures: Restoring Function

Category Richard of Clip

University of Notre Dame
Notre Dame, Indiana

Category: Biology of Glia
Approx. Funding: \$463,558

Award: Career Transition Fellowships

Term: 1/1/2023-6/30/2026

#### "Elucidating molecular mechanisms of neural stem cell-derived gliogenesis in remyelination"

Researchers at Notre Dame are exploring how myelin-making cells derived from stem cells might be used to repair myelin in MS models.

Funded in part by the Dave Tomlinson Research Fund

# **IOWA**

Alexander Boyden, Ph.D.

The University of Iowa

Iowa City, Iowa

Award: Role of Viruses RFA - 2023 Term: 10/1/2023-9/30/2024 Pathway to Cures: Ending MS Category: Immunology Approx. Funding: \$110,000

Pathway to Cures: Restoring Function

Category: Rehabilitation

Approx. Funding: \$353,585

Pathway to Cures: Stopping MS

Category: Immunology

Approx. Funding: \$630,502

"Impact of gamma herpesvirus infection on required B cell:CD4 T cell interactions in a novel B cell-dependent, antibody-independent EAE model" Researchers at the University of Iowa are working to discover how a virus infection affects certain immune cell interactions in a mouse model of MS.

Tyler Titcomb, Ph.D.

The University of Iowa Pathway to Cures: Stopping MS

Iowa City, Iowa Category: Epidemiology
Award: Career Transition Fellowships Approx. Funding: \$603,625

Term: 7/1/2023-6/30/2028

"Registered Dietitians, Nutritional Risk, and Dietary Patterns in Multiple Sclerosis" A team at the University of Iowa are seeking evidence for the idea that including a registered dietitian nutritionist on MS care teams can improve the course of MS.

# **KANSAS**

Jacob Sosnoff, Ph.D.

University of Kansas Medical Center

Kansas City, Kansas

Award: Mentor-Based Postdoctoral Fellowships

Term: 2/15/2021-6/30/2024

"Cognitive Motor Interference Rehabilitation in Multiple Sclerosis" Experienced mentors/researchers at the University of Illinois Urbana-Champaign are training promising rehabilitation professionals to conduct MS rehabilitation research.

# **MARYLAND**

Pavan Bhargava, M.D.

Johns Hopkins University

Baltimore, Maryland

Award: Harry Weaver Scholar Awards

Term: 7/1/2021-6/30/2026

"Understanding the contributions of metabolic dysfunction to MS pathophysiology" Researchers at Johns Hopkins University are exploring how byproducts of energy processes in immune and brain cells may contribute to MS development.

Paid by the Marilyn Hilton MS Research Fund

#### Peter Calabresi, M.D.

Johns Hopkins University

Baltimore, Maryland

Pathway to Cures: Stopping MS
Category: CNS Repair

Award: Research Grants

Approx. Funding: \$840,246

Term: 6/1/2020-11/30/2024

"Validation of Serum Neurofilament Light Chain as a Biomarker in Multiple Sclerosis:Subtypes and controls" Johns Hopkins researchers are determining whether blood levels of a neurofilament, released when nerves are damaged, can be validated as a blood test to monitor MS and predict its course.

# Blake Dewey, Ph.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Measuring MS Disease Activity

Award: Postdoctoral Fellowships Approx. Funding: \$190,752

Term: 7/1/2021-6/30/2024

"Validating spinal cord imaging outcomes for evaluating patient progression" Researchers at Johns Hopkins University are exploring novel strategies for tracking the transition of people to progressive MS.

#### Kathryn Fitzgerald, D.Sc.

Johns Hopkins University

Baltimore, Maryland

Award: International Progressive MS Alliance

Pathway to Cures: Stopping MS

Category: Human Genetics

Approx. Funding: \$75,000

Term: 7/1/2021-6/30/2024

"Multi-omic predictors of chronic inflammation in multiple sclerosis" Exploring the biological and genetic bases for the chronic inflammation that occurs in people with progressive MS, for clues to stopping progression.

Estimated joint commitment with other Progressive MS Alliance members

# Kathryn Fitzgerald, D.Sc.

Johns Hopkins University

Baltimore, Maryland

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Human Genetics

Approx. Funding: \$192,556

Term: 10/1/2022-9/30/2025

"Multiscale cell type mapping of gray and white matter pathology in multiple sclerosis (Award 2 of 2)" Collaborators in Germany and the U.S. are identifying differences in genes turned on or off among various cell types and regions in the brains of people with MS for insight into why some areas are more vulnerable to inflammation than others.

# Kathryn Fitzgerald, D.Sc.

Johns Hopkins University Pathway to Cures: Restoring Function

Baltimore, Maryland Category: Epidemiology
Award: Career Transition Fellowships Approx. Funding: \$412,500

Term: 7/1/2019-6/30/2024

"The Melanopsin Pathway, Changes to Brain Structure and Depression in People with Multiple Sclerosis" Because depression is common in MS, Johns Hopkins researchers are looking for early signs of brain and eye changes that may signal depression, for clues to identifying and preventing this symptom. Paid by the Marilyn Hilton MS Research Fund

# Sachin Gadani, M.D., Ph.D.

Johns Hopkins University

Baltimore, Maryland

Award: NMSS-ABF MS Clinician Scientist Award

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$297,114

Term: 7/1/2022-6/30/2025

"Defining the role of inflammatory oligodendrocyte precursor cells on chronic inflammation and impaired remyelination in CNS autoimmunity" A team at Johns Hopkins is investigating how myelin repair is blocked when myelin-making cells turn inflammatory, and how to reverse this process.

ABF Awardee

# Marjan Gharagozloo, Ph.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Immunology
Award: Career Transition Fellowships Approx. Funding: \$550,000

Term: 7/1/2022-6/30/2027

"Investigating the role of NLRX1 in glia-mediated inflammation and neurotoxicity using experimental models of multiple sclerosis" Johns Hopkins researchers are investigating the role of a molecule in brain inflammation in mice with an MS-like disease.

Paid by the Marilyn Hilton MS Research Fund

# Alexander Gill, M.D., Ph.D.

Johns Hopkins University

Baltimore, Maryland

Award: NMSS-ABF MS Clinician Scientist Award

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$293,307

Term: 7/1/2021-6/30/2024

"Targeting Neurotoxic Inflammatory Glia and NLRX1 in MS/EAE" Scientists at Johns Hopkins are targeting a protein in MS-like disease with an eye toward developing therapies to stop MS.

ABF Awardee

#### Karla Gray-Roncal, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2023-6/30/2026 Approx. Funding: \$225,000

"Sylvia Lawry Physician Fellowship for Dr. Karla Gray-Roncal" A promising doctor at Johns Hopkins University will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

#### Kimystian Harrison, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2021-6/30/2024 Approx. Funding: \$195,500

"Clinical Trials Training in Multiple Sclerosis" A promising doctor at Johns Hopkins University will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

#### Daniel Harrison, M.D.

University of Maryland, Baltimore Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Measuring MS Disease Activity

Award: Research Grants Approx. Funding: \$586,820

Term: 5/1/2022-4/30/2025

"Development of a Convolutional Neural Network for MRI Prediction of Progression and Treatment Response in Progressive Forms of Multiple Sclerosis" University of Maryland researchers are testing a novel technology to predict MS progression and the effects treatment for progressive MS.

# Abbey Hughes, Ph.D.

Johns Hopkins University Pathway to Cures: Restoring Function

Baltimore, Maryland Category: Rehabilitation
Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$447,216

Term: 7/1/2020-6/30/2025

"Advancing Psychosocial Wellness in Multiple Sclerosis Through Mentored Training in Rehabilitation Research" Rehabilitation researchers at Johns Hopkins have received funding to train promising rehabilitation professionals to conduct MS rehabilitation research.

Paid by the Marilyn Hilton MS Research Fund

# Larissa Jank, M.D.

Johns Hopkins University Pathway to Cures: Restoring Function
Baltimore, Maryland Category: Preclinical Drug Development

Award: Postdoctoral Fellowships Approx. Funding: \$205,470

Term: 7/1/2023-6/30/2026

"Indole-3-lactate – a novel metabolic modulator of oligodendroglial function and a potential remyelinating agent for multiple sclerosis" Johns Hopkins researchers are exploring the effect of a molecule produced in the gut on the brain and whether taking related dietary supplements may help restore nerve-insulating myelin.

Paid by the Kenrose Kitchen Table Foundation and J. David Power, III

# Ellen Mowry, M.D., M.C.R.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Strategic Initiatives of M

Term: 4/1/2019-3/31/2024 Approx. Funding: \$534,669

"Traditional versus Early Aggressive Therapy for Multiple Sclerosis (TREAT-MS)" The Society is leveraging PCORI-funded clinical trials to support an MS biobank as a shared resource for researchers searching for biomarkers that will help elucidate predictors of long-term disability and treatment response.

#### Bardia Nourbakhsh, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Research Grants of MS

Term: 4/1/2019-3/31/2024 Approx. Funding: \$397,249

"Evaluating the effects of short-term B-cell depletion on long-term disease activity and immune tolerance in relapsing multiple sclerosis" Johns Hopkins researchers are exploring the longer-term impacts of short-term use of B-cell depleting therapy on the immune system and MS disease activity.

#### Bardia Nourbakhsh, M.D.

Johns Hopkins University Pathway to Cures: Restoring Function

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Harry Weaver Scholar Awards of MS

Term: 7/1/2022-6/30/2027 Approx. Funding: \$763,720

"New measurement tools for assessing a novel targeted treatment of multiple sclerosis fatigue"
Johns Hopkins researchers are testing a potential treatment for fatigue in people with MS and evaluating new ways of measuring MS fatigue.

Paid by the Marilyn Hilton MS Research Fund

#### Samantha Roman, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2022-6/30/2025 Approx. Funding: \$195,000

**"MS Clinical Trials Fellowship"** A promising doctor at Johns Hopkins will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

# Shiv Saidha, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Measuring MS Disease Activity

Award: Research Grants Approx. Funding: \$606,133

Term: 10/1/2020-3/31/2025

"In-vivo investigation of retinal and cerebral vascular and metabolic dysfunction, and determination of their clinical significance in multiple sclerosis" Johns Hopkins researchers are assessing how efficiently nerve tissue is processing energy in people with MS, for clues to identifying people who may benefit from stronger therapies, and to find new strategies for treating MS.

# Alexandra Simpson, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2021-6/30/2024 Approx. Funding: \$195,000

"Targeting Remyelination, Repair Mechanisms, and Symptom Management in Multiple Sclerosis through Clinical Trials" A promising doctor at Johns Hopkins will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Paid by the Kenrose Kitchen Table Foundation and J. David Power, III

# Elias Sotirchos, M.D.

Johns Hopkins University Pathway to Cures: Stopping MS

Baltimore, Maryland Category: Measuring MS Disease Activity

Award: Career Transition Fellowships Approx. Funding: \$148,500

Term: 7/1/2020-6/30/2025

"Prediction of risk of disability worsening and inflammatory disease activity in MS utilizing multimodal predictive algorithms" Johns Hopkins University researchers are studying multiple factors in large numbers of people with MS to provide insight into which factors are associated with a more severe disease course.

#### Jing-Ping Lin, Ph.D.

National Institutes of Health/National Institute of
Neurological Disorders and Stroke

Bethesda, Maryland

Pathway to Cures: Stopping MS
Category: Biology of Glia
Approx. Funding: \$606,065

Award: Career Transition Fellowships

Term: 7/1/2023-6/30/2028

"Identifying signaling modules that drive glial senescence in a model of multiple sclerosis" NIH researchers are studying the involvement of specific brain cells in the destruction and restoration nervous system tissues during aging and in MS-like inflammation for clues to stopping disease activities and enhancing repair.

#### Serhat Okar, M.D.

National Institutes of Health/National Institute of
Neurological Disorders and Stroke

Pathway to Cures: Stopping MS
Category: Diagnostic Methods
Approx. Funding: \$233,334

Award: Postdoctoral Fellowships Term: 7/1/2023-6/30/2026

"Evaluation of Diagnostic and Disease-Monitoring Performance of Portable Ultra-low Field (64 mT) Magnetic Resonance Imaging in Patients with Multiple Sclerosis and Progressive Multifocal

**Leukoencephalopathy"** NIH researchers are testing the ability of portable MRI scanners to lower costs and improve diagnosis and monitoring of people with MS.

# Michelle Pleet, Ph.D.

National Institutes of Health/National Institute of
Neurological Disorders and Stroke

Bethesda, Maryland

Pathway to Cures: Ending MS
Category: Neuropathology
Approx. Funding: \$136,786

Award: Postdoctoral Fellowships Term: 7/1/2022-6/30/2024

"Origin and Cargo of CSF EVs from MS patients as Signatures of Disease" A team at NIH is investigating the importance of extracellular vesicles, which are packets of information released from cells into the blood, in MS.

#### Daniel Reich, M.D., Ph.D.

National Institutes of Health/National Institute of
Neurological Disorders and Stroke

Bethesda, Maryland

Pathway to Cures: Stopping MS
Category: Tissue/DNA Banks
Approx. Funding: \$337,487

Award: Strategic Initiatives Term: 10/1/2020-9/30/2027

"National Multiple Sclerosis Tissue Repository Network (Award 3 of 3)" Developing and maintaining a tissue bank of specimens from people with MS for use in research.

#### Farinaz Safavi, M.D., Ph.D.

National Institutes of Health Pathway to Cures: Stopping MS

Bethesda, Maryland Category: Immunology Award: NMSS-ABF MS Clinician Scientist Award Approx. Funding: \$289,351

Term: 7/1/2020-6/30/2024

"Role of Bruton Tyrosine kinase in neuroinflammation and neurodegeneration" NIH researchers are exploring the role that specific B cell subtypes play in the development of inflammation in MS, and how ocrelizumab affects these cells.

ABF Awardee

#### Charidimos Tsagkas, M.D., Ph.D.

National Institutes of Health Pathway to Cures: Stopping MS

Bethesda, Maryland Category: Measuring MS Disease Activity

Award: Postdoctoral Fellowships Approx. Funding: \$131,886

Term: 7/1/2022-6/30/2025

"Molecular Imaging of CNS-Immune System Interactions in Multiple Sclerosis" NIH researchers are developing an imaging method that may allow better visualization of inflammation in the brain and spinal cord in MS.

# **MASSACHUSETTS**

Ana Anderson, Ph.D.

Brigham and Women's Hospital

Boston, Massachusetts Award: Research Grants Term: 4/1/2023-3/31/2026 Pathway to Cures: Stopping MS

Category: Immunology Approx. Funding: \$396,000

"A TCF-1-Glucocorticoid regulatory axis underlies genetic susceptibility and steroid responsiveness in CNS autoimmunity" Brigham and Women's researchers are studying how immune molecules interact for clues to improving a standard treatment of MS relapses.

# Kjetil Bjornevik, M.D., Ph.D.

Harvard School of Public Health

Boston, Massachusetts

Award: Early Detection RFA - Spring 2021

Pathway to Cures: Ending MS

Category: Epidemiology

Approx. Funding: \$168,563

Term: 11/1/2022-10/31/2024

"Expanding our understanding of the MS prodrome phenotype—a prospective study in two large cohorts of women" Harvard researchers are using long-range health data to detect early signs of MS up to 15 years before symptoms appear.

Paid by the Marilyn Hilton MS Research Fund

#### Wesley Brandão, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS
Boston, Massachusetts Category: Neuropathology
Award: Postdoctoral Fellowships Approx. Funding: \$141,176

Term: 7/1/2022-6/30/2025

"The role of APOE-mediated neurodegenerative microglia subset on T cell response and functions in EAE" A team at Brigham and Women's Hospital is studying the role of immune brain cells called microglia in MS progression.

#### Mary Catanese, Ph.D.

Massachusetts General Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts Category: Measuring MS Disease Activity

Award: Postdoctoral Fellowships Approx. Funding: \$196,309

Term: 7/1/2020-1/31/2024

"In vivo neuroimaging of histone deacetylases in Multiple Sclerosis" Researchers at Mass General are using imaging to explore the role of a protein in MS-related damage to the nervous system, for clues to developing better therapies.

Funded in full by a gift from the Kaufer Family

#### Natalia Drosu, Ph.D.

Massachusetts General HospitalPathway to Cures: Ending MSBoston, MassachusettsCategory: ImmunologyAward: Postdoctoral FellowshipsApprox. Funding: \$197,528

Term: 7/1/2023-6/30/2026

"CD4+ T cell responses to immunodominant HLA-DRB1\*15:01-restricted Epstein-Barr virus antigens in patients with multiple sclerosis with potential cross-reactivity to myelin" Researchers at Mass General Hospital are examining how environmental and genetic sensitivity to the Epstein-Barr virus may work together to trigger MS.

#### Dan Hu, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts
Category: Immunology
Award: Research Grants
Approx. Funding: \$599,999

Term: 5/1/2022-4/30/2025

"Heat shock protein-mediated regulation of T cell responses in Multiple Sclerosis" A team at

Brigham and Women's is investigating the role of a protein called Hsp70 in regulating the balance between

aggressive and calming immune responses linked to MS.

Paid by the Marilyn Hilton MS Research Fund

# Mahsa Khayatkhoei, M.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts

Category: Immunology

Award: Postdoctoral Fellowships

Approx. Funding: \$201,903

Term: 7/1/2022-6/30/2025

"The Role of Monocytes in Progressive Multiple Sclerosis" A team at Brigham and Women's is testing

the importance of immune cells called monocytes in progressive forms of MS.

The Kathleen C Moore Foundation Postdoctoral Fellowship

#### Yoon-Chul Kye, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts Category: Immunology
Award: Postdoctoral Fellowships Approx. Funding: \$193,789

Term: 7/1/2021-6/30/2024

"The role of immune checkpoint molecules on B cell in CNS autoimmune diseases" Researchers at Brigham and Women's Hospital are determining how to optimize and improve upon therapies that target immune B cells in people with MS.

#### Nara Michaelson, M.D.

Massachusetts General Hospital Pathway to Cures: Restoring Function

Boston, Massachusetts Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2025-6/30/2026 Approx. Funding: \$75,000

"Improving Physical and Cognitive Abilities in Multiple Sclerosis: A Clinical Trials Training Plan"

A promising doctor at Massachusetts General Hospital will develop the skills involved in the design,

implementation, and analysis of clinical trials in MS.

#### Novalia Pishesha, Ph.D.

Boston Children's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts

Award: Career Transition Fellowships

Category: Immunology

Approx. Funding: \$610,812

Term: 7/1/2023-6/30/2028

"Engineering the modularity of a single domain antibody fragment that target Class II MHC for inducing antigen-specific tolerance" Researchers at Boston Children's Hospital are modifying certain proteins that can affect the immune system as a strategy for turning off immune attacks in MS.

# Prudence Plummer, Ph.D., P.T.

MGH Institute of Health Professions Pathway to Cures: Restoring Function

Boston, Massachusetts

Category: Rehabilitation

Award: Functional Recovery RFA - 2023

Approx. Funding: \$725,913

Term: 10/1/2023-9/30/2026

"Dalfampridine combined with physical therapy for mobility impairment in people with multiple sclerosis" Mass General researchers are testing whether walking can be improved by combining rehabilitation with a pharmacological treatment for walking.

#### Francisco Quintana, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS
Boston, Massachusetts Category: Biology of Glia
Award: International Progressive MS Alliance - Approx. Funding: \$7,551,836

Collaborative Network Center Term: 1/1/2017-12/31/2025

"Development of a drug discovery pipeline for progressive MS" Identifying candidates with neuroprotective and/or myelin repair activity to speed the search for treatments for progressive MS. Estimated joint commitment with other Progressive MS Alliance members; Funded in part by an Anonymous Donor

# Luke Schwerdtfeger, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS
Boston, Massachusetts Category: Immunology
Award: Postdoctoral Fellowships Approx. Funding: \$205,470

Award: Postdoctoral Fellowships Term: 7/1/2023-6/30/2026

"Role of novel microbes and their metabolites identified in progressive MS in driving CNS autoimmunity" Researchers at Brigham and Women's Hospital are examining compounds made by intestinal microbes to see if and how they may be involved in MS disease activity.

# Syed Suhail, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts Category: Immunology Award: Postdoctoral Fellowships Approx. Funding: \$205,470

Term: 7/1/2023-6/30/2026

# "Role of TIM-3 on myeloid cells in regulating neuroinflammation and neurodegeneration" Researchers at Brigham and Women's Hospital/ Harvard Medical School are studying how an immune molecule called TIM-3 affects immune responses in the brain and spinal cord in progressive MS.

#### Anastasia Vishnevetsky, M.D., M.P.H.

Massachusetts General Hospital Pathway to Cures: Restoring Function

Boston, Massachusetts Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2022-6/30/2024 Approx. Funding: \$130,000

"Addressing Fatigue and Quality of Life in Multiple Sclerosis: A Clinical Trials Training Plan" A promising doctor at Mass General will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

# Dandan Yang, Ph.D.

Brigham and Women's Hospital Pathway to Cures: Stopping MS

Boston, Massachusetts
Category: Immunology
Award: Postdoctoral Fellowships
Approx. Funding: \$212,153

Term: 7/1/2023-6/30/2026

"Glucocorticoid biosynthesis and sensing of Th17 cells in CNS autoimmunity" Researchers at Brigham and Women's Hospital are investigating why steroids work better for some people with MS than others and to make them more effective in quelling attacks on the nervous system.

# Bo Fernhall, Ph.D.

University of Massachusetts Boston Pathway to Cures: Restoring Function

Dorchester, Massachusetts Category: Physiology

Award: Functional Recovery RFA - 2023 Approx. Funding: \$719,399

Term: 10/1/2023-9/30/2026

"Targeting vascular mechanisms of functional outcomes via home-based exercise training among persons with multiple sclerosis who have hypertension" UMass Boston researchers are testing a home-based exercise program to see if it can improve blood pressure, cognition and mobility in people with MS who have high blood pressure.

# Robert McBurney, Ph.D.

Accelerated Cure Project for MS

Pathway to Cures: Restoring Function

Waltham, Massachusetts

Category: Measuring MS Disease Activity

Award: Strategic Initiatives Approx. Funding: \$2,186,187

Term: 10/1/2018-9/30/2024

"Pathways to Cures Project Collaboration" Collaborating with iConquerMS patient powered platform to gain input on research priorities and impacts.

# Robert McBurney, Ph.D.

Accelerated Cure Project for MS Pathway to Cures: Stopping MS

Waltham, Massachusetts Category: Measuring MS Disease Activity

Award: Strategic Initiatives Approx. Funding: \$449,216

Term: 4/1/2021-3/31/2024

"COVID-19 Vaccine Response in MS Project (COVER-MS Project)" iConquerMS is gathering important information related to the COVID-19 vaccines and how they work in people affected by MS.

# **MICHIGAN**

Anna Kratz, Ph.D.

Pathway to Cures: Restoring Function
Category: Psychosocial Aspects of MS

Regents of the University of Michigan

Approx. Funding: \$16,809

Ann Arbor, Michigan Award: Strategic Initiatives

Term: 10/1/2023-9/30/2024

"A Nationwide Survey of Psychosocial Wellness in MS" University of Michigan researchers are leading an effort to survey people with MS with the purpose of gathering data to enhance psychosocial wellness.

# Anna Kratz, Ph.D.

Regents of the University of Michigan

Ann Arbor, Michigan

Pathway to Cures: Restoring Function
Category: Psychosocial Aspects of MS

Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$421,202

Term: 7/1/2019-6/30/2024

"Training to Advance Rehabilitation Research in Multiple Sclerosis" Experienced mentors/researchers at the University of Michigan are training promising rehabilitation professionals to conduct MS rehabilitation research.

# Sebastian Werneburg, Ph.D.

Regents of the University of Michigan

Ann Arbor, Michigan

Award: Career Transition Fellowships

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$432,082

Term: 9/1/2023-8/31/2026

"Molecular Dissection of Neural Circuit Disassembly by Reactive Glia in Demyelinating Disease" A team at UMass is studying the fate of synapses -- the points of communication between two nerve cells -- throughout the course of MS.

Funded in part by the Dave Tomlinson Research Fund

#### Nora Fritz, Ph.D., P.T., D.P.T., N.C.S.

Wayne State University Pathway to Cures: Restoring Function

Detroit, Michigan

Award: Research Grants

Category: Rehabilitation

Approx. Funding: \$599,679

Term: 7/1/2022-4/30/2025

"TRAIN-BW: Feasibilty, Acceptability and Impact of Backward Walking Training in Persons with MS" Researchers at Wayne State are testing the feasibility of backward walking training to prevent falls and improve mobility in people with MS.

# Nora Fritz, Ph.D., P.T., D.P.T., N.C.S.

Wayne State University Pathway to Cures: Restoring Function

Detroit, Michigan

Award: Mentor-Based Postdoctoral Fellowships

Category: Rehabilitation

Approx. Funding: \$467,505

Term: 7/1/2022-6/30/2027

"Advancing Rehabilitation Research for Persons with Multiple Sclerosis" Rehabilitation researchers at Wayne State University are training postdoctoral scientists in how to conduct MS research aimed at reversing symptoms and restoring function.

Paid by the Marilyn Hilton MS Research Fund

#### Shailendra Giri, Ph.D.

Henry Ford Health System/Henry Ford Health Sciences Pathway to Cures: Stopping MS

Center Category: Preclinical Drug Development

Detroit, Michigan Approx. Funding: \$596,699

Award: Research Grants Term: 5/1/2022-4/30/2025

"Specialized pro-resolving mediator, maresin 1, abrogates EAE disease progression" Henry Ford Health Sciences Center researchers are testing a molecule in mice with an MS-like disease for its potential for decreasing MS-related brain inflammation.

Paid by the Marilyn Hilton MS Research Fund

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# **MINNESOTA**

American Brain Foundation,

American Brain Foundation Minneapolis, Minnesota

Award: Research Contracts Term: 9/25/2023-6/30/2025

"American Brain Foundation Harnessing Neuroinflammation Initiative" A cross-disciplinary research initiative that brings together nonprofit organizations, pharmaceutical and biotech investors, philanthropists, and researchers to provide funding for research on the role of neuroinflammation in a wide range of brain disease

Pathway to Cures: Stopping MS

Pathway to Cures: Restoring Function

Category: Immunology

Category: Rehabilitation

Approx. Funding: \$756,059

Approx. Funding: \$300,000

# **MISSOURI**

Jared Bruce, Ph.D.

University of Missouri - Kansas City

Kansas, Missouri

Award: Research Grants

Term: 10/1/2020-9/30/2024 "Development of a telehealth obesity intervention for patients with MS" A University of Missouri team is testing the effectiveness of an MS-specific weigh loss/healthy living program delivered by phone, since

obesity can profoundly worsen MS severity. Paid by the Marilyn Hilton MS Research Fund

# Brian Edelson, M.D., Ph.D.

Washington University School of Medicine-M
St. Louis, Missouri
Category: Immunology
Award: Research Grants
Approx. Funding: \$595,050

Term: 5/1/2022-4/30/2025

"T cell-intrinsic roles for the ZFP36 family proteins in MS and EAE" A team at Washington University in St. Louis is investigating how specific MS risk genes influence the activity of immune T cells in MS.

#### Daniel Hawiger, M.D., Ph.D.

Saint Louis University

St. Louis, Missouri

Award: Early Detection RFA - Spring 2021

Pathway to Cures: Ending MS

Category: Diagnostic Methods

Approx. Funding: \$298,546

Term: 10/1/2021-9/30/2024

"Detecting autoimmune potential of CD4+ T cells in the early MS disease process" Saint Louis University investigators are search for novel immune cell fingerprints that would indicate pre-symptom MS to speed diagnosis earlier in the disease.

Paid by the Marilyn Hilton MS Research Fund

#### Laura Piccio, M.D., Ph.D.

Washington University School of Medicine-M Pathway to Cures: Stopping MS

St. Louis, Missouri Category: Immunology
Award: Research Grants Approx. Funding: \$925,866

Term: 4/1/2017-3/31/2024

"Randomized controlled trial of intermittent fasting in multiple sclerosis" Investigators at Washington University in St. Louis are conducting a clinical trial comparing intermittent fasting with a normal western diet in people with MS.

#### Laura Piccio, M.D., Ph.D.

Washington University School of Medicine-M
St. Louis, Missouri
Award: Research Grants
Pathway to Cures: Stopping MS
Category: Diagnostic Methods
Approx. Funding: \$652,160

Term: 4/1/2020-3/31/2024

"Cerebrospinal fluid-biomarkers-based diagnostic and prognostic models for Multiple Sclerosis"

Washington University researchers are using powerful technology to measure spinal fluid proteins to develop biomarker profiles to predict MS course and response to treatments.

# **NEW JERSEY**

Kouichi Ito, Ph.D.

Pathway to Cures: Restoring Function

Catagory Impunction

Rutgers, The State University of New Jersey
Piscataway, New Jersey

Category: Immunology
Approx. Funding: \$600,334

Award: Research Grants
Term: 10/1/2019-6/30/2024

"Gut dysbiosis-mediated CNS autoimmunity" Rutgers University scientists are examining whether a specially designed high-fiber supplement can reduce changes in gut bacteria associated with MS.

# John DeLuca, Ph.D.

Kessler Foundation Research Center Pathway to Cures: Restoring Function

West Orange, New Jersey

Award: Mentor-Based Postdoctoral Fellowships

Category: Rehabilitation

Approx. Funding: \$468,019

Term: 7/1/2022-6/30/2027

**"MS Fellowship in Neuropsychological Rehabilitation"** Experienced mentors/researchers at the Kessler Foundation are training promising rehabilitation professionals to conduct MS rehabilitation research.

Paid by the Marilyn Hilton MS Research Fund

#### Carly Wender, Ph.D.

Kessler Foundation Research Center Pathway to Cures: Restoring Function

West Orange, New Jersey

Category: Rehabilitation

Award: Functional Recovery RFA - 2023

Approx. Funding: \$725,499

Term: 10/1/2023-9/30/2026

"A Novel Combinatory Approach to Maximize Functional Recovery of Learning and Memory in Multiple Sclerosis" Kessler Foundation researchers are testing a combined approach to improving cognitive function in people with MS, involving cognitive rehabilitation and exercise.

#### **NEW YORK**

Pathway to Cures: Stopping MS
Erin Beck, M.D., Ph.D.

Icahn School of Medicine at Mount Sinai

Category: Measuring MS Disease Activity

Approx Funding: \$404.407

New York, New York

Approx. Funding: \$404,407

Award: Career Transition Fellowships

Term: 9/20/2021-6/30/2024

"Evolution of cortical pathology and its relation to meningeal inflammation in multiple sclerosis"

NIH researchers are using advanced imaging to look at specific areas of damage in the brains of people with

MS that are linked with progression, for clues to developing treatments that can stop the disease.

# Korhan Buyukturkoglu, Ph.D.

Columbia University Pathway to Cures: Restoring Function
New York, New York Category: Measuring MS Disease Activity

Award: Harry Weaver Scholar Awards Approx. Funding: \$730,849

Term: 7/1/2023-6/30/2028

"Thalamus Derived Radiomic Features to Explore Cognitive Impairment in People With Multiple Sclerosis and At-Risk Individuals" Researchers at Columbia are using advanced technology to find a way to leverage clinical MRIs in screening for cognitive problems in MS.

#### Leigh Charvet, Ph.D.

New York University Langone Medical Center Pathway to Cures: Stopping MS

New York, New York Category: Measuring MS Disease Activity

Award: Early Detection RFA - Spring 2021 Approx. Funding: \$324,991

Term: 10/1/2021-9/30/2024

"Intra-Individual Variability in Cognitive Performance as a Marker of Prodromal Disability in MS" Researchers at New York University are cataloging subtle variations in thinking speed to see if they can be an early predictor of future disability in MS and inform ways to stop progression.

# Philip De Jager, M.D., Ph.D.

Columbia University
Pathway to Cures: Stopping MS
New York, New York
Category: Tissue/DNA Banks
Award: Strategic Initiatives
Approx. Funding: \$5,936,259

Term: 10/1/2020-9/30/2027

"National Multiple Sclerosis Tissue Repository Network (Award 1 of 3)" Researchers are building a state-of-the-art tissue bank of specimens from people with MS to support research on Pathways to Cures.

#### Susan Gauthier, D.O.

Weill Cornell Medical College Pathway to Cures: Stopping MS

New York, New York Category: Measuring MS Disease Activity

Award: Compartmentalized Inflammation RFA - 2022 Approx. Funding: \$656,698

Term: 10/1/2022-9/30/2025

"Establishing the clinical relevance of chronic active MS lesions and quantification of their inflammatory trajectory for a new treatment target." A team at Weill Cornell Medical College is using a type of MRI to understand the role of inflammation in chronic, long-term lesions in the brain of people with MS.

#### Victoria Leavitt, Ph.D.

Columbia University Pathway to Cures: Restoring Function

New York, New York

Award: Mentor-Based Postdoctoral Fellowships

Category: Rehabilitation

Approx. Funding: \$489,489

Term: 7/1/2022-6/30/2027

"Cognitive Rehabilitation in MS: Translating Neuroscience from Laboratory to Life" Experienced mentors/researchers at Columbia University are training promising rehabilitation professionals to conduct MS rehabilitation research.

Paid by the Marilyn Hilton MS Research Fund

#### Shane Liddelow, Ph.D.

New York University Langone Medical Center

New York, New York

Award: Harry Weaver Scholar Awards

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$404,917

Term: 7/1/2022-6/30/2027

"Neurotoxic lipids drive death of oligodendrocytes" New York University researchers are investigating a toxin secreted by cells in the brain that affects myelin making cells and their functions in MS-like disease.

#### Thanh Nguyen, Ph.D.

Weill Cornell Medical College Pathway to Cures: Restoring Function
New York, New York Category: Measuring MS Disease Activity

Award: Research Grants Approx. Funding: \$884,012

Term: 10/1/2016-12/31/2023

"Quantitative MRI of lesion iron and myelin repair" Weill Cornell Medical College researchers are testing and validating a novel imaging technique for use in determining how iron in MS lesions in the brain may affect myelin repair.

# Ceren Tozlu, Ph.D.

Weill Cornell Medical College Pathway to Cures: Restoring Function

New York, New York

Award: Career Transition Fellowships

Category: Neuropathology

Approx. Funding: \$607,777

Term: 7/1/2023-6/30/2028

"Multi-modal neuroimaging and cognitive assessment of females with multiple sclerosis across different stages of menopause" Researchers at Weill Cornell are exploring how menopause affects thinking and memory in women with MS.

# Timothy Vartanian, M.D., Ph.D.

Weill Cornell Medical College
Pathway to Cures: Ending MS
New York, New York
Category: Infectious Agents
Award: Research Grants
Approx. Funding: \$616,672

Term: 4/1/2023-3/31/2026

"Harboring the Initial Trigger of Multiple Sclerosis" A team at Weill Cornell Medical College are determining whether bacteria that have been associated with MS are related to changes in disease activity, for clues to developing a therapy that targets these bacteria and possibly prevent MS activity.

#### Elizabeth Verter, M.D.

Icahn School of Medicine at Mount Sinai Pathway to Cures: Stopping MS

New York, New York Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2022-6/30/2024 Approx. Funding: \$130,000

**"Sylvia Lawry Physician Fellowship"** A promising doctor at the Icahn School of Medicine at Mt. Sinai will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

# Liwei Wang, Ph.D.

New York University Langone Medical Center Pathway to Cures: Stopping MS

New York, New York

Award: Postdoctoral Fellowships

Category: Immunology

Approx. Funding: \$204,814

Term: 7/1/2021-6/30/2024

"Investigation of novel ion channels as potential next-generation therapeutic targets for MS" A team at NYU is exploring the potential of a therapeutic strategy for MS based on proteins on cell surfaces and inside of cells known as ion channels.

# **NORTH CAROLINA**

Alessandro Didonna, Ph.D.

East Carolina University Greenville, North Carolina

Award: International Progressive MS Alliance

Term: 7/1/2021-11/30/2023

"Tau misfolding and progression in multiple sclerosis" Using a powerful, new tool to explore the

Pathway to Cures: Stopping MS

Category: Neuropathology

Approx. Funding: \$75,000

possible role of a toxic protein in the progression of MS.

Estimated joint commitment with other Progressive MS Alliance members

OHIO

Qing Lu, Ph.D.

Pathway to Cures: Restoring Function
Category CNS Pagein

Children's Hospital Medical Center - Cincinnati
Cincinnati, Ohio

Category: CNS Repair
Approx. Funding: \$599,999

Award: Research Grants Term: 5/1/2022-4/30/2025

"Small molecule modulators of chromatin remodeling for myelin repair" Researchers at Children's Hospital Medical Center in Cincinnati are exploring the role of the molecule HDAC3 in inhibiting myelin repair and testing ways to stop it to enhance repair in MS.

Benjamin Clayton, Ph.D.

Case Western Reserve University Pathway to Cures: Restoring Function

Cleveland, Ohio Category: CNS Repair
Award: Career Transition Fellowships Approx. Funding: \$553,557

Term: 7/1/2022-6/30/2027

"Functional Genetic Screen Identifies a Novel Remyelination Target in MS" Case Western Reserve researchers are identifying new targets for treatments that could repair the damage that occurs to the nervous system in people with MS.

Paid by the Kenrose Kitchen Table Foundation and J. David Power, III

#### Dimitrios Davalos, Ph.D.

Cleveland Clinic Foundation

Cleveland, Ohio

Award: Research Grants

Term: 4/1/2019-3/31/2024

Pathway to Cures: Stopping MS

Category: Biology of Glia

Approx. Funding: \$563,135

"Gliovascular Mechanisms of Blood-Brain Barrier Disruption in Multiple Sclerosis" Cleveland Clinic researchers are using novel techniques to explore mechanisms involved in early immune cell infiltration into the central nervous system in MS-like disease, for clues to stopping immune attacks in MS.

#### Robert Fox, M.D.

Cleveland Clinic Foundation Pathway to Cures: Stopping MS

Cleveland, Ohio Category: Measuring MS Disease Activity

Award: Strategic Initiatives Approx. Funding: \$1,224,590

Term: 7/1/2023-6/30/2026

**"SPRINT-MS Follow-up Study"** A team at Cleveland Clinic and a network of other centers is following up with participants from a previous clinical trial to identify a brain MRI marker that better predicts whether a therapy works in progressive MS.

#### Elina Misicka, Ph.D.

Case Western Reserve University Pathway to Cures: Stopping MS

Cleveland, Ohio
Category: Epidemiology
Award: Postdoctoral Fellowships
Approx. Funding: \$132,101

Term: 7/1/2023-6/30/2025

"Metabolomic biomarkers of risk, severity, and progression of multiple sclerosis. Don Bell Memorial Fellowship, Sponsored by Rabbits Unlimited, Ltd." Researchers at Case Western are looking for biomarkers associated with MS risk, severity and progression to promote better treatment and prevention. Don Bell Memorial Fellowship, Sponsored by Rabbits Unlimited, Ltd.

#### Daniel Ontaneda, M.D., Ph.D.

Cleveland Clinic Foundation Pathway to Cures: Stopping MS

Cleveland, Ohio Category: Human Therapy Trials/Management

Award: Strategic Initiatives of Ma

Term: 4/1/2019-6/30/2026 Approx. Funding: \$1,451,679

"Determining the Effectiveness of early Intensive Versus Escalation approaches for the treatment of Relapsing-Remitting Multiple Sclerosis (DELIVER-MS)" An international team is extending a clinical trial originally funded by PCORI to determine whether early, highly effective treatments are the better approach to preventing future disability in people with relapsing MS.

# Matthew Plow, Ph.D.

Case Western Reserve University Pathway to Cures: Restoring Function

Cleveland, Ohio Category: Rehabilitation
Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$451,374

Term: 7/1/2021-6/30/2026

"Training Nurse Scientists to Improve the Outcomes of Rehabilitation Interventions in People with Multiple Sclerosis" Rehabilitation researchers at Case Western Reserve University are training scientist nurses how to conduct MS research aimed at reversing symptoms and restoring function.

#### Karlo Toljan, M.D.

Cleveland Clinic Foundation Pathway to Cures: Stopping MS

Cleveland, Ohio Category: Human Therapy Trials/Management

Award: Sylvia Lawry Physician Fellowships of MS

Term: 7/1/2023-6/30/2026 Approx. Funding: \$225,000

"Training in clinical trials in multiple sclerosis" A promising doctor at the Cleveland Clinic will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

#### Bruce Trapp, Ph.D.

Cleveland Clinic Foundation

Cleveland, Ohio

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Neuropathology

Approx. Funding: \$660,000

Term: 10/1/2022-9/30/2025

"Comprehensive analysis of compartmentalized inflammation in multiple sclerosis brain" A team at the Cleveland Clinic is investigating how brain cells called microglia may have different activities depending on where they are located, which may be related to lesion expansion and disability progression in MS.

#### Jessica Williams, Ph.D.

Cleveland Clinic Foundation Pathway to Cures: Stopping MS Cleveland, Ohio Category: Biology of Glia Award: Compartmentalized Inflammation RFA - 2022 Approx. Funding: \$660,000

Term: 10/1/2022-9/30/2025

"The role of astrocyte PD-L1 in dampening compartmentalized chronic inflammation" A team at the Cleveland Clinic is investigating whether activating an immune mechanism will turn off chronic inflammation in MS.

# OREGON

Pathway to Cures: Stopping MS Daniel Hartung, Pharm.D., M.P.H.

Category: Health Care Delivery/ Policy Oregon State University Approx. Funding: \$36,000

Corvalis, Oregon

Award: Strategic Initiatives Term: 2/1/2020-9/30/2024

"Updating Cost of MS Medication" Researchers at Oregon State University are investigating reasons for the escalating costs of MS treatments.

#### Michelle Cameron, M.D., P.T.

Oregon Health & Science University Pathway to Cures: Restoring Function

Portland, Oregon Category: Rehabilitation Approx. Funding: \$624,956 Award: Research Grants

Term: 10/1/2019-7/31/2024

# "A Randomized Controlled Trial of a Multicomponent Walking Aid Program for People with MS"

Oregon Health & Science University researchers are testing whether a standardized program provided by physical therapists, that helps to select, fit, and train in using walking aids, can prevent falls in people with MS.

#### Gregory Duncan, Ph.D.

Oregon Health & Science University Pathway to Cures: Stopping MS

Portland, Oregon Category: CNS Repair Award: Career Transition Fellowships Approx. Funding: \$584,647

Term: 7/1/2022-6/30/2027

"Mechanisms of neurodegeneration following remyelination failure" Researchers at Oregon Health and Science are investigating signals that cause nerve cells to die when myelin is lost in MS, and whether blocking them could decrease disability.

# Larry Sherman, Ph.D.

Oregon Health & Science University Pathway to Cures: Restoring Function

Category: CNS Repair Portland, Oregon Award: Research Grants Approx. Funding: \$599,999

Term: 4/1/2023-3/31/2026

"Role of Hyaluronan in MS Cognitive Dysfunction" Researchers at Oregon Health & Science University are exploring whether a molecule called hyaluronan contributes to problems with cognition in MS, and whether blocking its activity can improve memory in lab models.

# Rebecca Spain, M.D., M.S.P.H.

Oregon Health & Science University Pathway to Cures: Stopping MS

Portland, Oregon Category: Human Therapy Trials/Management

Award: Strategic Initiatives of MS

Term: 10/1/2017-9/30/2024 Approx. Funding: \$1,467,875

"Lipoic acid for the treatment of progressive multiple sclerosis" Investigators at Oregon Health & Science University are conducting a clinical trial to determine if the oral supplement, lipoic acid, is an effective treatment for progressive forms of multiple sclerosis.

# **PENNSYLVANIA**

Amit Bar-Or, M.D.

Pathway to Cures: Stopping MS

University of Pennsylvania

Philadelphia, Pennsylvania

Category: Immunology

Approx. Funding: \$375,000

Award: Strategic Initiatives Term: 4/1/2021-3/31/2024

"Linking multiple disease compartments in T1D and Multiple Sclerosis" Exploring similarities and differences in the damaging immune attacks in MS and Type 1 diabetes for clues to better therapies.

# Lindsay Festa, Ph.D.

University of Pennsylvania Pathway to Cures: Restoring Function

Philadelphia, Pennsylvania Category: CNS Repair Award: Career Transition Fellowships Approx. Funding: \$610,065

Term: 7/1/2023-6/30/2028

"Regulation of the oligodendrocyte actin cytoskeleton by the lysosomal cation channel TRPML1" Researchers at UPenn are working on strategies that enhance repair and restoration of myelin, the nerve coating that is damaged in MS.

#### Edward Gettings, D.O.

Temple University Pathway to Cures: Restoring Function Philadelphia, Pennsylvania Category: Health Care Delivery/ Policy

Award: Strategic Initiatives Approx. Funding: \$202,811

Term: 3/1/2021-6/30/2024

"What are the barriers preventing access to rehabilitation services, particularly maintenance services among people with MS and what are some of the potential solutions to these barriers?" Researchers at Temple University in Philadelphia are examining how to improve access to rehabilitation services for people with MS.

#### Jennifer Orthmann Murphy, M.D., Ph.D.

University of Pennsylvania Pathway to Cures: Restoring Function

Philadelphia, Pennsylvania

Category: Biology of Glia

Award: Research Grants

Approx. Funding: \$653,875

Term: 4/1/2023-3/31/2026

"The role of microglia in cortical remyelination" A team at the University of Pennsylvania is investigating features of brain cells called "microglia" that could be manipulated to enhance myelin repair. Funded in full by the Kaufer Family

# Jennifer Orthmann Murphy, M.D., Ph.D.

University of Pennsylvania Pathway to Cures: Restoring Function

Philadelphia, Pennsylvania Category: Biology of Glia Award: Compartmentalized Inflammation RFA - 2022 Approx. Funding: \$625,528

Term: 10/1/2022-9/30/2025

"Defining cortical reactive astrocyte heterogeneity and contribution to remyelination" A team at the University of Pennsylvania is investigating features of brain cells called "astrocytes" that could be manipulated to enhance myelin repair.

# Elizabeth Sweeney, Ph.D.

University of Pennsylvania Pathway to Cures: Stopping MS

Philadelphia, Pennsylvania Category: Measuring MS Disease Activity

Award: Biostatistics/Informatics Junior Faculty Award Approx. Funding: \$265,232

Term: 1/1/2022-6/30/2024

"Evaluation of and Automated Image Analysis Tools for a QSM Rim Positive Multiple Sclerosis Lesion Biomarker" Developing new, automated ways to analyze brain scans to better detect the benefits of MS therapies against chronic inflammation.

Paid by the Marilyn Hilton MS Research Fund

# **TENNESSEE**

Pathway to Cures: Stopping MS Francesca Bagnato, M.D., Ph.D. Category: Diagnostic Methods

Vanderbilt University Medical Center Approx. Funding: \$904,640

Nashville, Tennessee Award: Research Grants Term: 10/1/2019-9/30/2024

"7T-rings as a biomarker of disease severity in multiple sclerosis: cross-sectional and longitudinal validation" Vanderbilt University researchers are testing whether an indicator found using powerful imaging tools can – if found early – serve to predict and ultimately prevent a more severe course of MS.

#### **TEXAS**

Pathway to Cures: Stopping MS Amber Salter, Ph.D., M.P.H.

Category: Measuring MS Disease Activity The University of Texas Southwestern Medical Center

Dallas, Texas

Award: Strategic Initiatives Term: 10/1/2022-3/31/2024

"Understanding Post-COVID-19 Syndrome in Individuals with MS using the NARCOMS Registry" Researchers are investigating the impacts of long COVID and other infections in people with MS to improve care.

Approx. Funding: \$164,558

#### Amber Salter, Ph.D., M.P.H.

The University of Texas Southwestern Medical Center Pathway to Cures: Stopping MS

Dallas, Texas Category: Epidemiology

Award: Biostatistics/Informatics Junior Faculty Award Approx. Funding: \$222,760

Term: 7/1/2021-6/30/2024

"Investigation of MS Disease Progression Using a Multifactorial Approach" Researchers at UT Southwestern and collaborators are examining MS worsening to uncover predictors of disease progression and improve preemptive care.

Paid by the Marilyn Hilton MS Research Fund

#### Olaf Stuve, M.D., Ph.D.

The University of Texas Southwestern Medical Center

Dallas, Texas

Award: Compartmentalized Inflammation RFA - 2022

Term: 10/1/2022-9/30/2025

Pathway to Cures: Stopping MS Category: Diagnostic Methods Approx. Funding: \$659,363

"Deciphering choroid plexus volume changes in multiple sclerosis" University of Texas Southwestern Medical Center scientists are studying a structure in the brain called the choroid plexus to determine if it is an indicator of MS disease stage and a site of entry into the brain for particular subsets of inflammatory cel

# Hyun Kyoung Lee, Ph.D.

Baylor College of Medicine Pathway to Cures: Restoring Function

Houston, Texas Category: Biology of Glia Award: Research Grants Approx. Funding: \$821,063

Term: 4/1/2020-3/31/2024

"Deciphering the Daam2-VHL signaling axis in oligodendrocyte remyelination in multiple sclerosis" Baylor researchers are focusing on understanding interactions of molecules to find a way to promote the repair of myelin that has been damaged by MS.

Funded in part by the Donald C. McGraw Foundation

# Manzoor Bhat, Ph.D.

The University of Texas Health Science Center at San

Pathway to Cures: Restoring Function

Antonio Category: Biology of Glia San Antonio, Texas Approx. Funding: \$545,884

Award: Research Grants Term: 10/1/2020-9/30/2024

"Restoration of Axonal Domains in Myelinated Axons and Prevention of Motor Disability" Scientists at the University of Texas Health Science Center at San Antonio are developing models to determine how damage to nerve cells and fibers occurs in MS and how it can be reversed to restore function.

# **UTAH**

Theren Corner Ph D

Theron Casper, Ph.D.

University of Utah

Category: Human Therapy Trials/Management

of MS

Salt Lake City, Utah
Award: Strategic Initiatives
Term: 7/1/2022-6/30/2025

Approx. Funding: \$3,499,411

"Renewal of Pediatric MS Network" The Society is supporting a one-of-a-kind network for research to advance knowledge and understanding of the triggers and impacts of MS in both children and adults.

#### Karen Ho, Ph.D.

Clene Nanomedicine Pathway to Cures: Restoring Function
Salt Lake City, Utah Category: Preclinical Drug Development

Award: Fast Forward Approx. Funding: \$661,402 Term: 4/28/2023-4/28/2024

"A Phase 2, Open Label, Sequential Group, Investigator Blinded Study Using Magnetic Resonance Spectroscopy to Assess the Effects of CNM-Au8 for Bioenergetic Improvement of Impaired Neuronal Redox State in Non-Active Progressive Multiple Sclerosis" A team is studying whether an experimental therapy called Biocatalytic Nanocrystalline Gold can provide energy to brain cells and promote myelin repair and nerve protection.

#### Karen Ho, Ph.D.

Clene Nanomedicine Pathway to Cures: Restoring Function Salt Lake City, Utah Category: Measuring MS Disease Activity

Award: Fast Forward Approx. Funding: \$339,232

Term: 9/30/2019-12/31/2023

"A Biomarker Analysis of Patients with Relapsing Remitting Multiple Sclerosis Treated with Biocatalytic Nanocrystalline Gold (CNM-Au8)" Clene Nanomedicine scientists are leveraging an ongoing clinical trial to measure blood biomarkers that may help detect nervous system protection and myelin repair in MS.

#### VIRGINIA

Pathway to Cures: Stopping MS Lindsey Rechtman, Dr.P.H.

Category: Health Care Delivery and Policy McKing Consulting Corporation

Research

Fairfax, Virginia Approx. Funding: \$225,733 Award: Research Contracts

Term: 3/6/2023-3/31/2024

"Landscape Analysis Contract" Gathering data on global investments in multiple sclerosis research by non-profit and government organizations

# Myla Goldman, M.D.

Virginia Commonwealth University Pathway to Cures: Stopping MS Richmond, Virginia Category: Neurophysiology Award: Research Grants Approx. Funding: \$259,921

Term: 4/1/2023-3/31/2026

# "Validation of 6MW Gait Speed Trajectory as a Clinical Outcome Measure of Demyelination"

Researchers at Virginia Commonwealth University are testing whether a new walking test can better identify myelin damage in people with MS, which may help to improve the success rate of clinical trials of repair strategies.

#### Myla Goldman, M.D.

Virginia Commonwealth University Pathway to Cures: Restoring Function

Richmond, Virginia Category: Human Therapy Trials/Management

Award: Research Grants of MS

Term: 10/1/2019-12/31/2023 Approx. Funding: \$329,238

"Assessment of the Clinical Importance of Insulin Resistance & Steroid-Associated Hyperglycemia in Relapsing Multiple Sclerosis" A team from Virginia Commonwealth University is exploring whether controlling blood sugar can decrease the severity and/or improve recovery from an acute MS relapse.

# Carmen Sato-Bigbee, Ph.D.

Virginia Commonwealth University Pathway to Cures: Stopping MS Richmond, Virginia Category: Biology of Glia Award: Research Grants Approx. Funding: \$600,000

Term: 4/1/2023-3/31/2026

"Nociceptin role in the progression of multiple sclerosis" Researchers at Virginia Commonwealth University are targeting a protein that may promote MS progression, for clues to stopping MS in its tracks.

# WASHINGTON

Dawn Ehde, Ph.D.

University of Washington

Seattle, Washington

Award: Functional Recovery RFA - 2023

Term: 10/1/2023-9/30/2026

"Increasing Physical Activity via Provider Prescription and Engagement: Efficacy of Exercise Rx for Adults with Multiple Sclerosis" A team at the University of Washington is testing a novel electronic platform that bridges the communication gap between providers and people with MS to increase physical activity and restore function in people with MS.

Pathway to Cures: Restoring Function

Category: Rehabilitation

Approx. Funding: \$725,451

# Mark Jensen, Ph.D.

University of Washington Pathway to Cures: Restoring Function Seattle, Washington Category: Psychosocial Aspects of MS

Award: Research Grants Approx. Funding: \$611,701

Term: 10/1/2020-9/30/2024

"Hypnosis and Mindfulness Meditation for Fatigue Management in MS" A University of Washington team is evaluating the effects of two highly accessible ways for individuals with MS to learn either selfhypnosis or mindfulness strategies for fatigue management on their own, without needing to work with a trained clinician.

# Ivan Molton, Ph.D.

University of Washington Pathway to Cures: Restoring Function Seattle, Washington Category: Psychosocial Aspects of MS Award: Research Grants Approx. Funding: \$1,189,303

Term: 4/1/2019-3/31/2024

# "Efficacy of a psychological intervention to improve ability to cope with uncertainty in MS."

University of Washington researchers are comparing traditional behavioral therapy with briefer counseling to determine how to better help people newly diagnosed with MS to cope with the uncertainty of the disease.

#### Aaron Turner, Ph.D.

University of Washington Pathway to Cures: Restoring Function

Seattle, Washington Category: Rehabilitation Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$401,426

Term: 7/1/2018-6/30/2024

"The Seattle Collaborative Fellowship" Researchers at the University of Washington and VA Puget Sound are training a series of promising professionals in how to conduct MS rehabilitation research.

# Yevgeniy Yuzefpolskiy, Ph.D.

Benaroya Research Institute Pathway to Cures: Stopping MS

Category: Immunology Seattle, Washington Award: Postdoctoral Fellowships Approx. Funding: \$212,153

Term: 9/1/2023-8/31/2026

"Role of B cells in Modulating Metabolic Pathways of Pathogenic CD4 T cells in Murine Model of Multiple Sclerosis" Researchers at Benaroya are focusing on how disease-causing immune T cells form and are affected by B cells with the aim of deleting them or preventing them from forming in the first place.

### **WISCONSIN**

Bonnie Dittel, Ph.D.

Versiti Blood Research Institute

Milwaukee, Wisconsin

Award: Role of Viruses RFA - 2023 Term: 10/1/2023-9/30/2024

Category: Immunology Approx. Funding: \$110,000

"Development of a mouse model to study the impact of Epstein Barr Virus on multiple sclerosis" Scientists at the Versiti Blood Research Institute are developing a mouse model to study the impact of the Epstein-Barr virus on MS.

#### **OUTSIDE OF THE UNITED STATES**

# **AUSTRALIA**

Judith Greer, Ph.D.

The University of Queensland Brisbane, Queensland, Australia Award: Role of Viruses RFA - 2023 Term: 10/1/2023-9/30/2024

Pathway to Cures: Ending MS Category: Immunology Approx. Funding: \$100,000

Pathway to Cures: Stopping MS

"Using a novel humanized mouse model to investigate how EBV infection at different ages potentiates development of CNS demyelinating disease" Researchers at the University of Queensland in Australia are trying to find the link between the age a person is infected with Epstein-Barr virus and the likelihood of developing MS.

# Lachlan Rash, Ph.D.

The University of Queensland Brisbane, Queensland, Australia

Award: Research Grants

Term: 4/1/2023-3/31/2026

Pathway to Cures: Stopping MS

Category: Preclinical Drug Development

Approx. Funding: \$584,879

"Target validation of acid-sensing ion channel inhibitors to stop disease progression and manage pain in MS" Researchers at The University of Queensland in Australia are developing an inhibitory molecule that may help to protect the nervous system and prevent symptoms such as pain in people with MS.

# Allan Kermode, M.D.

University of Western Australia Crawley, Western Australia, Australia Award: Compartmentalized Inflammation RFA - 2022

Term: 10/1/2022-9/30/2025

Pathway to Cures: Ending MS Category: Immunology Approx. Funding: \$577,992

"White matter lesion single nuclei transcriptomics and epitope discovery to identify immune targets in multiple sclerosis" University of Western Australia researchers are determining if components of the brain that are mistakenly targeted by the immune system in MS are similar to components of the Epstein-Barr virus.

#### Lucinda Black, Ph.D.

Deakin University Geelong, Victoria, Australia Award: Research Grants Term: 4/1/2023-3/31/2026

Category: Epidemiology Approx. Funding: \$480,129

Pathway to Cures: Stopping MS

"Elucidating the role of diet in multiple sclerosis to improve disease outcomes" Researchers at Deakin University in Australia is looking for evidence of a role for diet in slowing MS progression.

# Yuyi You, M.D., Ph.D.

Macquarie University Pathway to Cures: Stopping MS North Ryde, New South Wales, Australia Category: Neuropathology Award: Research Grants Approx. Funding: \$543,272

Term: 4/1/2020-3/31/2024

# "Investigating the role of demyelination in anterograde transsynaptic degeneration in MS"

University of Sydney researchers are studying the contributions of myelin loss to nerve degeneration, which can lead to MS progression.

**BELGIUM** 

Pathway to Cures: Restoring Function Barbara Willekens, M.D., Ph.D.

Category: Human Therapy Trials/Management Antwerp University Hospital

of MS

Antwerp, Belgium Approx. Funding: \$546,156 Award: Research Grants

Term: 4/1/2023-3/31/2026

"MACSIMISE-BRAIN: Metformin Add-on Clinical Study in Multiple Sclerosis to Evaluate Brain Remyelination And Neurodegeneration" A team at Antwerp University Hospital in Belgium testing the ability of metformin – a therapy approved for diabetes – to stop progression and restore function in people with progressive MS.

CANADA

Pathway to Cures: Stopping MS Douglas Arnold, M.D.

Category: Human Therapy Trials/Management McGill University

Montréal, Quebec, Canada Approx. Funding: \$3,947,220

Award: International Progressive MS Alliance -

Collaborative Network Center Term: 1/1/2017-12/31/2023

"An MRI biomarker for disability progression for use in clinical trials" Identifying a biomarker of disability progression for use in clinical trials.

Estimated joint commitment with other Progressive MS Alliance members

#### Haritha Desu, Ph.D.

University of Montreal Hospital Pathway to Cures: Stopping MS Montréal, Quebec, Canada Category: CNS Repair Award: Postdoctoral Fellowships Approx. Funding: \$197,528 Term: 7/1/2023-6/30/2026

"Investigating T cell/oligodendrocyte interactions in multiple sclerosis: neuroprotective role of **ICAM-1 signaling"** A team at the University of Montreal Hospital is working to understand how immune T cells injure the cells that build nerve-insulating myelin and how to protect them to promote myelin repair.

#### Jennifer Gommerman, Ph.D.

University of Toronto Pathway to Cures: Stopping MS

Toronto, Ontario, Canada Category: Immunology Award: Compartmentalized Inflammation RFA - 2022 Approx. Funding: \$300,000

Term: 10/1/2022-9/30/2025

"Compartmentalized inflammation in MS – A Focus on Fibroblasts" A team at the University of Toronto and l'Université de Montréal is working to understand cell interactions in the meninges (a protective cover of the brain) and to determine if blocking these interactions will stop MS.

Co-funded with the MS Society of Canada

#### Matthew Lincoln, M.D., Ph.D.

Unity Health Toronto Pathway to Cures: Ending MS
Toronto, Ontario, Canada Category: Human Genetics
Award: Career Transition Fellowships Approx. Funding: \$375,000

Term: 7/1/2022-6/30/2025

"Genetic and molecular heterogeneity of MS" A team at Yale is seeking to fine tune MS genetic studies using a novel framework that combines MS genetics data with similar data from related diseases, for insight into disease mechanisms and possible gene regulation.

# Chao Wang, Ph.D.

Sunnybrook Research Institute Pathway to Cures: Stopping MS

Toronto, Ontario, Canada Category: Immunology
Award: Career Transition Fellowships Approx. Funding: \$274,113

Term: 3/1/2021-12/31/2023

"Regulation of TH17 cell function by CD5Like" Researchers at Brigham and Women's Hospital in Boston are exploring how a recently discovered molecule may be used to develop a strategy for stopping the immune attack in MS in its tracks.

# E. Yeh, M.D.

The Hospital for Sick Children Pathway to Cures: Restoring Function

Toronto, Ontario, Canada Category: Rehabilitation
Award: Mentor-Based Postdoctoral Fellowships Approx. Funding: \$352,950

Term: 7/1/2015-6/30/2024

"Pediatric MS: Shaping the future of outcomes and disability" This training program at the University of Toronto Hospital for Sick Children equips researchers with experience and knowledge to design and conduct research aimed at improving wellness in children with MS.

#### Dalia Rotstein, M.D.

St. Michael's Hospital-Unity Health Toronto

Toronto, Ontario, Canada

Award: Research Grants

Pathway to Cures: Ending MS

Category: Epidemiology

Approx. Funding: \$151,000

Term: 4/1/2023-3/31/2026

"When does MS begin after infectious mononucleosis?" A team in Toronto is using a novel dataset to map out the earliest steps of MS in people who had mononucleosis, for clues to developing strategies that can end MS by prevention.

#### E. Yeh, M.D.

The Hospital for Sick Children Pathway to Cures: Restoring Function

Toronto, Ontario, Canada Category: Rehabilitation
Award: Functional Recovery RFA - 2023 Approx. Funding: \$134,789

Term: 10/1/2023-9/30/2026

"An Exercise Training Intervention for Depressive Symptoms in Youth with MS: A Randomized Controlled Feasibility Trial" University of Toronto researchers are testing an exercise program that uses coaching to increase physical activity and possibly reduce depression and fatigue in children with MS. Co-funded with MS Canada

#### Marc Horwitz, Ph.D.

University of British Columbia Pathway to Cures: Stopping MS Vancouver, British Columbia, Canada Category: Infectious Agents Award: Role of Viruses RFA - 2023 Approx. Funding: \$25,436

Term: 10/1/2023-9/30/2024

"Fighting the Hidden Enemy: Therapeutic strategies targeting latent gammaherpesvirus infection in an autoimmune animal model of multiple sclerosis" A team at University of British Columbia is testing known EBV-targeting treatments in MS models to determine if they can reduce the severity or even prevent MS-like disease.

Co-funded with MS Canada

#### Helen Tremlett, Ph.D.

University of British Columbia Pathway to Cures: Stopping MS Vancouver, British Columbia, Canada Category: Epidemiology Award: Early Detection RFA - Spring 2021 Approx. Funding: \$144,500

Term: 10/1/2021-11/7/2024

"Heterogeneity in the MS prodrome and impact on disease progression (PrOMS-HD)" University of British Columbia researchers, along with collaborators across Canada and Sweden, are searching medical records for early, unrecognized warning signs of MS to enable pre-emptive treatment.

# Marc Horwitz, Ph.D.

University of British Columbia Pathway to Cures: Ending MS Vancouver, British Columbia, Canada Award: Role of Viruses RFA - 2023 Approx. Funding: \$25,594

Term: 10/1/2023-9/30/2024

"Novel preclinical humanized mouse models of MS to investigate the in's and out's of EBV's role in disease initiation" University of British Columbia researchers are developing MS models for studying how EBV may trigger MS and how to prevent it.

Co-funded with MS Canada

#### Mahmoud Pouladi, Ph.D.

University of British Columbia Pathway to Cures: Ending MS Vancouver, British Columbia, Canada Category: Biology of Glia Award: Research Grants Approx. Funding: \$395,200

Term: 1/1/2022-3/31/2024

**"Ermin in Multiple Sclerosis"** Researchers in Singapore are doing lab studies to understand how a rare gene mutation related to myelin may influence the risk of developing MS.

# **FINLAND**

Pathway to Cures: Stopping MS

Laura Airas, M.D., Ph.D.

Category: Measuring MS Disease Activity

Approx. Funding: \$600,000

Helsinki, Finland

Approx. Funding: \$600,000

Award: Compartmentalized Inflammation RFA - 2022

Term: 10/1/2022-9/30/2025

"Exploring microglia and astrocyte-driven pathology in MS using multimodal MRI and PET imaging" University of Turku (Finland) scientists are determining the best types of imaging for detecting and tracking chronic inflammation in the nervous system of people with MS.

# **GERMANY**

Stefan Gold, Ph.D.

Charité - Universitätsmedizin Berlin

Berlin, Germany

Award: Mentor-Based Postdoctoral Fellowships

Term: 7/1/2018-6/30/2024

"Neurobiological Mechanisms of Rehabilitation in MS" Researchers at the Charité University Medical Center Berlin, Germany are training promising professionals to advance MS rehabilitation research by applying molecular biology techniques.

Pathway to Cures: Restoring Function

Category: Psychosocial Aspects of MS

Approx. Funding: \$414,685

# Lucas Schirmer, M.D.

University of Heidelberg

Heidelberg, Germany

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Human Genetics

Approx. Funding: \$358,939

Term: 10/1/2022-9/30/2025

"Multiscale cell type mapping of gray and white matter pathology in multiple sclerosis (Award 1 of 2)" Collaborators in Germany and the U.S. are identifying differences in genes turned on or off among various cell types and regions in the brains of people with MS for insight into why some areas are more vulnerable to inflammation than others.

#### Lisa Ann Gerdes, M.D.

University Hospital LMU Munich Germany

Munich, Germany

Award: Early Detection RFA - Spring 2021

Pathway to Cures: Ending MS

Category: Immunology

Approx. Funding: \$297,000

Term: 10/1/2021-12/31/2024

"Disease-triggering potential of microbiota in prodromal MS" Researchers in Munich are studying gut bacteria in twins with and without MS to identify possible risk factors that trigger MS. Paid by the Marilyn Hilton MS Research Fund

# Tanja Kuhlmann, M.D.

University Hospital Münster

Münster, Germany

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Neuropathology

Approx. Funding: \$574,838

Term: 10/1/2022-9/30/2025

"Histological, transcriptomic and functional characterization of a new lesion type associated with fast disease progression" A team at the University Hospital Münster, Germany and the Netherlands Institute for Neuroscience in Amsterdam is investigating a type of lesion that is commonly present in the brains of people with rapidly progressing MS and therapies that may treat thes

# **ITALY**

Francesca Bovis, Ph.D.

University of Genoa
Genoa, Italy

Pathway to Cures: Stopping MS
Category: Diagnostic Methods
Approx. Funding: \$99,000

Award: Biostatistics/Informatics Junior Faculty Award

Term: 7/1/2022-6/30/2025

"Personalizing treatment effect based on patient's baseline profile: A statistical modelling approach applied to observational study data" A team at the University of Genoa is using statistical methods to identify traits that support a personalized selection of treatment for MS.

#### Martina Absinta, M.D., PhD

Università Vita-Salute San Raffaele

Milano, Italy

Award: Compartmentalized Inflammation RFA - 2022

Pathway to Cures: Stopping MS

Category: Neuropathology

Approx. Funding: \$534,858

Term: 10/1/2022-9/30/2025

"MRI-single cell transcriptomic investigation of chronic active inflammation of the spinal cord in patients with multiple sclerosis" A team in Italy is investigating chronic inflammation in the spinal cord by analyzing genes from spinal cord cells, combined with MRI scan analysis, to find ways to target and stop inflammation in MS.

# Roberta Magliozzi, Ph.D.

University of Verona Pathway to Cures: Stopping MS Verona, Italy Category: Immunology Award: Role of Viruses RFA - 2023 Approx. Funding: \$100,000

Term: 10/1/2023-9/30/2024

"Meningeal lymphoid-like structures as secret EBV hideout in multiple sclerosis." Researchers at the University of Verona in Italy are working to identify molecules that may play a role in the Epstein-Barr virus's connection to MS-specific inflammation.

# **JAPAN**

Yuta Fujimoto, M.B.A.

J-Pharma Co., Ltd.

Pathway to Cures: Restoring Function
Category: Preclinical Drug Development
Approx. Funding: \$600,000

Yokohama, Japan

Approx. Funding: \$600,000

Award: Fast Forward

Term: 8/18/2023-8/17/2024

"IND enabling studies on a novel amino acid transport inhibitor to promote CNS repair in MS" This commercial funding opportunity supports studies that are necessary before a novel molecule that might promote nervous system repair can be tested in people with progressive MS.

#### **SPAIN**

Manuel Comabella, M.D., Ph.D.

Hospital Vall Hebron

Pathway to Cures: Stopping MS
Category: Immunology
Approx. Funding: \$315,090

Barcelona, Catalonia, Spain Award: Research Grants Term: 5/1/2022-4/30/2024

"Search of prognostic factors of conversion to multiple sclerosis in patients with radiologically isolated syndrome" Barcelona researchers are seeking ways to predict whether people with unexpected abnormalities on brain scans are most likely to develop MS.

Paid by the Marilyn Hilton MS Research Fund

# UNITED KINGDOM

Luca Peruzzotti-Jametti, M.D., Ph.D.

Pathway to Cures: Stopping MS
Category: Biology of Glia

University of Cambridge
Cambridge, United Kingdom

Category: Biology of Glia
Approx. Funding: \$599,422

Award: Compartmentalized Inflammation RFA - 2022

Term: 10/1/2022-9/30/2025

"METAbolic control of smoldering NEUROinflammation (META\_NEURO)" A team at the University of Cambridge is investigating miscommunication between cells in the brain that may occur during the course of progressive MS.

#### Cory Willis, Ph.D.

University of Cambridge Pathway to Cures: Stopping MS Cambridge, United Kingdom Category: Biology of Glia Award: Postdoctoral Fellowships Approx. Funding: \$193,789

Term: 7/1/2021-6/30/2024

"Exploring the role of ASTROcytic succinate recepTOR in neuroinflammation (ASTRO\_TOR)" Researchers at the University of Cambridge are exploring how certain brain cells may drive MS progression.

#### Jeremy Chataway, F.R.C.P., Ph.D.

University College London Pathway to Cures: Stopping MS

London, United Kingdom Category: Measuring MS Disease Activity

Award: Research Grants Approx. Funding: \$448,550

Term: 10/1/2017-10/1/2025

"MS-STAT2-MRI" Researchers from University College London are leading a multicenter trial in the UK to test whether a repurposed cholesterol-lowering therapy can slow the course of secondary progressive MS.

# Klaus Schmierer, F.R.C.P., M.D., Ph.D.

Queen Mary University of London Pathway to Cures: Stopping MS

London, United Kingdom Category: Human Therapy Trials/Management

Award: Strategic Initiatives of MS

Term: 10/1/2020-9/30/2025 Approx. Funding: \$100,000

"Chariot MS - MRI Substudy" Researchers in the United Kingdom are testing whether a disease-modifying therapy can preserve upper limb function in people with advanced MS.

#### MS Society UK,

MS Society UK Pathway to Cures: Stopping MS

London, United Kingdom Category: Human Therapy Trials/Management

Award: Strategic Initiatives of N

Term: 4/1/2017-6/30/2026 Approx. Funding: \$1,333,573

"HTA-CET-15/57/143-Dr Jeremy Chataway - MS-STAT2 - Phase 3 trial simvastatin" Researchers from University College London are leading a multicenter trial in the UK to test whether a repurposed cholesterol-lowering therapy can slow the course of secondary progressive MS.