

National Multiple Sclerosis Society

List of Current Research Projects Funded by the National MS Society

Sorted by Topic/Pathways to Cures

April 2024

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 April 1, 2024.

Notes:

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.
 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 <u>Pathways to Cures Roadmap</u> 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 populationbased 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; <u>Read</u>
 <u>more</u>
- **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 -Request for Applications** 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

Contents	
STOPPING MS	ERROR! BOOKMARK NOT DEFINED.
RESTORING FUNCTION	33
ENDING MS	51

STOPPING MS - 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.

Martina Absinta, MD, PhD Università Vita-Salute San Raffaele Milan, Italy Award: Request for Applications Category: Neuropathology Research Pathway: Stopping MS Estimated 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.

Laura Airas, MD, PhD

University of Turku Helsinki, Finland Award: Request for Applications Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated Funding: \$600,000 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. *Funded with support part by the National Stem Cell Foundation*

Laura Airas, MD, PhD

University of Turku Helsinki, Finland Award: International Progressive MS Alliance Category: Human Therapy Trials/Management of MS Research Pathway: Stopping MS Estimated Funding: €875,000 Term: 3/1/2024-12/31/2026

"A clinical proof-of-concept study using A2A adenosine receptor antagonist treatment to reduce smoldering inflammation in progressive MS" Early trial testing a novel treatment for progressive MS by reducing immune cell activation associated with inflammation. Joint commitment with other Progressive MS Alliance members

Ana Anderson, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$396,000 Term: 4/1/2023-3/31/2026

"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.

6

Jeffrey Atkinson, PhD

The Ohio State University Columbus, Ohio Award: Career Transition Fellowship Category: Biology of Glia

"Age-associated glial cell dysregulation in CNS autoimmune disease" Researchers at The Ohio State University are identifying factors that impact MS-like disease in aging mice for insights into stopping progression in people with MS.

Sidar Aydin, PhD

University of California San Diego San Diego, California Award: Postdoctoral Fellowship Category: Neuropharmacology Research Pathway: Stopping MS Estimated Funding: \$138,437 Term: 7/1/2024-6/30/2026

"The role of endothelial Stra6 in the modulation of neuroinflammation in the central nervous system" University of California San Diego researchers are investigating the role of Vitamin A on immune system function and MS-like symptoms in a mouse model of MS.

Christina Azevedo, MD, MPH

University of Southern California Los Angeles, California Award: Harry Weaver Scholar Award Category: Measuring MS Disease Activity Estimated Funding: \$747,267 Term: 7/1/2021-6/30/2026

Research Pathway: Stopping MS

"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*

Francesca Bagnato, MD, PhD

Vanderbilt University Medical Center Nashville, Tennessee Award: Research Grant Category: Diagnostic Methods "7T-rings as a biomarker of disease

"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.

Erin Beck, MD, PhD

Icahn School of Medicine at Mount Sinai New York, New York Award: Career Transition Fellowship Category: Measuring MS Disease Activity

"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.

Research Pathway: Stopping MS Estimated Funding: \$904,640 Term: 10/1/2019-9/30/2024

Research Pathway: Stopping MS

Estimated Funding: \$404,407 Term: 9/20/2021-6/30/2024

Research Pathway: Stopping MS Estimated Funding: \$619,773 Term: 7/1/2024-6/30/2029

Estelle Bettelli, PhD

Benaroya Research Institute Seattle, Washington Award: Research Grant Category: Immunology

"Targeting subsets of memory T cells to limit neuroinflammation" A team at Benaroya Research Institute in Seattle is studying how a rogue type of immune cell may serve as a target for therapies aiming to stop MS.

Pavan Bhargava, MD

Johns Hopkins University Baltimore, Maryland Award: Harry Weaver Scholar Award Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$630,502 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*

Lucinda Black, PhD

Deakin University Perth, Australia Award: Research Grant Category: Epidemiology Research Pathway: Stopping MS Estimated Funding: \$480,129 Term: 4/1/2023-3/31/2026

Research Pathway: Stopping MS Estimated Funding: \$99,000

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

"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.

Francesca Bovis, PhD

University of Genoa Genoa, Italy Award: Biostatistics/Informatics Junior Faculty Award Category: Diagnostic Methods "Personalizing treatment effect based on pat

Category: Diagnostic Methods **"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. *Paid by the Marilyn Hilton MS Research Fund*

Wesley Brandão, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Neuropathology Research Pathway: Stopping MS Estimated 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.

Research Pathway: Stopping MS Estimated Funding: \$726,000 Term: 4/1/2024-3/31/2027

Jeff Bulte, PhD

Johns Hopkins University Baltimore, Maryland Award: Request for Applications Category: Biochem./Biophysics

"MALDI identification of CEST MRI biomarkers that may precede and predict the onset of disease in Multiple sclerosis" Researchers at Johns Hopkins are using MRI to see if there are biochemical and other changes in the brain before MS symptoms start, to create an early detection tool for earlier treatment. *Paid by the Marilyn Hilton MS Research Fund*

Peter Calabresi, MD

Johns Hopkins University Baltimore, Maryland Award: Research Grant Category: CNS Repair Research Pathway: Stopping MS Estimated 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.

Claudia Cantoni, PhD

St. Joseph's Hospital and Medical Center, Barrow Neurological Institute Phoenix, Arizona Award: Career Transition Fellowship Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$273,341 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. *Paid by the Marilyn Hilton MS Research Fund*

Theron Casper, PhD

University of Utah Salt Lake City, Utah Award: Strategic Initiative Category: Human Therapy Trials/Management of MS Research Pathway: Stopping MS Estimated Funding: \$3,499,411 Term: 7/1/2022-6/30/2025

"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.

Research Pathway: Stopping MS Estimated Funding: \$321,851 Term: 10/1/2021-9/30/2024

Leigh Charvet, PhD

New York University Langone Medical Center New York, New York Award: Request for Applications Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated 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.

Jeremy Chataway, PhD, FRCP

University College London London, United Kingdom Award: Research Grant Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated 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.

Yanan Chen, MD, PhD

Loyola University - Chicago Chicago, Illinois Award: Career Transition Fellowship Category: CNS Repair Research Pathway: Stopping MS Estimated Funding: \$412,500 Term: 1/1/2023-12/31/2025

"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*

Manuel Comabella, MD, PhD

Hospital Vall Hebron Barcelona, Spain Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$315,090 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

Philip De Jager, MD, PhD

Columbia University New York, New York Award: Strategic Initiative Category: Tissue/DNA Banks Research Pathway: Stopping MS Estimated 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.

Haritha Desu, PhD

University of Montreal Hospital Montréal, Canada Award: Postdoctoral Fellowship Category: CNS Repair

"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.

Blake Dewey, PhD

Johns Hopkins University Baltimore, Maryland Award: Postdoctoral Fellowship Category: Measuring MS Disease Activity

"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.

Bonnie Dittel, PhD

Versiti Blood Research Institute Milwaukee, Wisconsin Award: Request for Applications Category: Immunology Estimated Funding: \$110,000 Term: 10/1/2023-9/30/2024

Research Pathway: Stopping MS

"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.

Gregory Duncan, PhD

Oregon Health & Science University Portland, Oregon Award: Career Transition Fellowship Category: CNS Repair Research Pathway: Stopping MS Estimated Funding: \$592,917 Term: 7/1/2022-8/11/2027

Research Pathway: Stopping MS

Estimated Funding: \$225,000

Term: 7/1/2024-6/30/2027

"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.

Angeliki Filippatou, MD

Johns Hopkins University Baltimore, Maryland Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

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

Estimated Funding: \$197,528 Term: 7/1/2023-6/30/2026

Research Pathway: Stopping MS

Term: 11/1/2021-10/31/2024

Estimated Funding: \$190,752

Research Pathway: Stopping MS

11

Kathryn Fitzgerald, ScD

Johns Hopkins University Baltimore, Maryland Award: International Progressive MS Alliance Category: Human Genetics

"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.

 $\label{eq:stimated} \textit{Estimated joint commitment with other Progressive MS Alliance members}$

Kathryn Fitzgerald, ScD

Johns Hopkins University Baltimore, Maryland Award: Request for Applications Category: Human Genetics Research Pathway: Stopping MS Estimated 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.

Robert Fox, MD

Cleveland Clinic Foundation Cleveland, Ohio Award: Strategic Initiatives - 2023 Category: Measuring MS Disease Activity Estimated Funding: \$1,224,590 Term: 7/1/2023-6/30/2026

Research Pathway: Stopping MS

"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.

Sachin Gadani, MD, PhD

Johns Hopkins University Baltimore, Maryland Award: NMSS-ABF Clinician Scientist Development Award Category: Biology of Glia

"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.

Co-funded with the American Brain Foundation

Research Pathway: Stopping MS Estimated Funding: \$297,114 Term: 7/1/2022-6/30/2025

Research Pathway: Stopping MS Estimated Funding: €75,000 Term: 7/1/2021-6/30/2024

Sachin Gadani, MD, PhD

Johns Hopkins University Baltimore, Maryland Award: Career Transition Fellowship Category: Biology of Glia Research Pathway: Stopping MS Estimated Funding: \$622,268 Term: 7/1/2024-6/30/2029

"Augmentation of IL-33-induced Amphiregulin to Regulate Pathologic Glia in MS"

Researchers at Johns Hopkins are investigating ways to enhance the effects of beneficial molecules to reduce inflammation and increase repair of tissue that is damaged in progressive MS.

Claudia Gambrah-Lyles, MD

Washington University in St. Louis St. Louis, Missouri Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS Research Pathway: Stopping MS Estimated Funding: \$225,500 Term: 7/1/2024-6/30/2027

"Clinical and Translational Research Training in Adult and Pediatric Multiple Sclerosis" A promising doctor at Washington University in St. Louis will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Gustavo Gastao Davanzo, PhD

Washington University in St. Louis St. Louis, Missouri Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$210,938 Term: 7/1/2024-6/30/2027

"Contribution of CNS-associated regulatory T cells to the maintenance of CNS-tolerance" Researchers at Washington University in St. Louis are investigating the formation of beneficial immune cells near the border between the meninges and brain and their role in the control of MS.

Susan Gauthier, DO

Weill Cornell Medical College New York, New York Award: Request for Applications Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated 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.

Josiah Gerdts, MD, PhD

University of California, San Francisco San Francisco, California Award: Career Transition Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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.

Marjan Gharagozloo, PhD

Johns Hopkins University Baltimore, Maryland Award: Career Transition Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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

Laura Ghezzi, MD, PhD

University of Milan Milan, Italy Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$18,457 Term: 6/1/2024-12/1/2024

"Characterization and quantification of Mucosal Associated Invariant T cells in patients with Multiple Sclerosis at time of diagnosis and in response to different disease modifying therapies" Researchers are exploring how diet and the gut microbiota may regulate the number and function of a specific type of immune cell. Paid by the Marilyn Hilton MS Research Fund

Laura Ghezzi, MD, PhD

University of Milan Milan, Italy Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$18,457 Term: 6/1/2024-12/1/2204

"Characterization and quantification of Mucosal Associated Invariant T cells in patients with Multiple Sclerosis at time of diagnosis and in response to different disease modifying therapies" Researchers at Washington University in St. Louis are exploring how diet and the gut microbiota may regulate the number and function of a specific type of immune cell. Paid by the Marilyn Hilton MS Research Fund

Erin Gibson, PhD

Stanford University Stanford, California Award: Research Grant Category: Biology of Glia Research Pathway: Stopping MS Estimated 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.

Alexander Gill, MD, PhD

Johns Hopkins University Baltimore, Maryland Award: NMSS-ABF Clinician Scientist Development Award Category: Biology of Glia

"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. *Co-funded with the American Brain Foundation*

Shailendra Giri, PhD

Henry Ford Health System/Henry Ford Health Sciences Center Detroit, Michigan Award: Research Grant Category: Preclinical Drug Development Research Pathway: Stopping MS Estimated Funding: \$596,699 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*

Myla Goldman, MD

Virginia Commonwealth University Richmond, Virginia Award: Research Grant Category: Neurophysiology Research Pathway: Stopping MS Estimated 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.

Jennifer Gommerman, PhD University of Toronto Toronto, Canada

Award: Request for Applications Category: Immunology Research Pathway: Stopping MS Estimated 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 Canada*

Research Pathway: Stopping MS Estimated Funding: \$293,307 Term: 7/1/2021-6/30/2024 University of Toronto Estimated Funding: €675,000 Toronto, Canada Term: 1/1/2024-12/31/2026 Award: International Progressive MS Alliance **Category: Immunology** "Mechanisms of innate immune - glial cell crosstalk in progressive MS" Defining the source of destructive immune activity that cuts nerve connections and its impact on a part of the brain that, when damaged, can lead to cognitive issues in MS.

Funded by MS Canada **Oksana Goroshchuk, MD, PhD**

Yale University New Haven. Connecticut Award: Postdoctoral Fellowship **Category: Immunology**

Jennifer Gommerman, PhD

"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.

Jennifer Graves, MD, PhD

University of California San Diego San Diego, California Award: Research Grant **Category: Epidemiology**

"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.

Karla Gray-Roncal, MD

Johns Hopkins University Baltimore, Maryland Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

"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, MD

Johns Hopkins University Baltimore, Maryland Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

"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.

Research Pathway: Stopping MS Estimated Funding: \$225,000 Term: 7/1/2023-6/30/2026

Research Pathway: Stopping MS

Estimated Funding: \$195.500

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

Research Pathway: Stopping MS

Research Pathway: Stopping MS

Estimated Funding: \$630,871

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

Research Pathway: Stopping MS Estimated Funding: \$201,903

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

Daniel Harrison, MD

University of Maryland, Baltimore Baltimore, Maryland Award: Research Grant Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated 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.

Daniel Hartung, PharmD, MPH Oregon State University

Corvalis, Oregon Award: Strategic Initiatives - 2020 Category: Health Care Delivery/ Policy Research Pathway: Stopping MS Estimated Funding: \$36,000 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.

Marc Horwitz, PhD University of British Columbia Vancouver, Canada Award: Request for Applications Category: Infectious Agents Research Pathway: Stopping MS Estimated 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*

Martin Hsu, PhD

University of North Carolina at Chapel Hill Chapel Hill, North Carolina Award: Postdoctoral Fellowship Category: Preclinical Drug Development Research Pathway: Stopping MS Estimated Funding: \$210,938 Term: 7/1/2024-6/30/2027

"Investigating a Novel Beneficial Gut Microbe for Potential MS Therapy" Researchers at the University of North Carolina at Chapel Hill are studying the ability of beneficial bacterial Bacteroidetes strains to prevent or treat MS-like disease in mice.

Dan Hu, PhD Brigham and Women's Hospital Boston, Massachusetts Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated 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, MD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology

"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*

Leslie Kirby, PhD Karolinska Institutet Stockholm, Sweden Award: Career Transition Fellowship Category: CNS Repair

"Defining the spatial cellular landscapes in MS to decode the underlying mechanisms of chronic inflammation and disease progression" Karolinska researchers are unraveling steps in the damaging inflammation in a structure that surrounds the brain for clues to new approaches to stop MS progression.

Tanja Kuhlmann, MD

University Hospital Münster Münster, Germany Award: Request for Applications Category: Neuropathology

"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

Yoon-Chul Kye, PhD Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology

Category: Human Therapy Trials/Management of MS

"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.

Jeffrey Lambe, MBBCh, MRCPIResearch Pathway: Stopping MSCleveland Clinic FoundationEstimated Funding: \$225,000Cleveland, OhioTerm: 7/1/2024-6/30/2027Award: Sylvia Lawry Physician FellowshipTerm: 7/1/2024-6/30/2027

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

Research Pathway: Stopping MS Estimated Funding: \$574,838 Term: 10/1/2022-9/30/2025

Research Pathway: Stopping MS

Estimated Funding: \$193,789

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

Research Pathway: Stopping MS Estimated Funding: \$201,903 Term: 7/1/2022-6/30/2025

Research Pathway: Stopping MS Estimated Funding: \$609,896

Term: 7/1/2024-6/30/2029

Fernanda Lang Schumacher, PhD The Ohio State University Columbus, Ohio Award: Biostatistics/Informatics Junior Faculty Award Category: Human Genetics

"Epigenetics in MS: An evaluation of biological aging and disease severity" Researchers at The Ohio State University are analyzing how MS progression is affected by accelerated aging, for clues to stopping progression in its tracks.

Jeannette Lechner-Scott, PhD, FRCP

University of Newcastle - Australia Callaghan, Australia Award: International Progressive MS Alliance Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated Funding: €673,214 Term: 1/1/2024-12/31/2026

"A Multi-omics approach to tackling progression in multiple sclerosis" Investigating links between lifestyle, environment and genetics to identify factors that may lead to more rapid MS progression, for clues to stopping MS progression.

Joint commitment with other Progressive MS Alliance members

David Leppert, MD

University Hospital Basel Basel, Switzerland Award: International Progressive MS Alliance Category: Diagnostic Methods Research Pathway: Stopping MS Estimated Funding: €220,000 Term: 1/1/2024-12/31/2024

"Neurofilament light chain and glial fibrillary acidic protein as tools to prognosticate the clinical course, and to quantify drug response in progressive multiple sclerosis" Cataloguing normal and disease-related levels of biomarkers to serves as indicators of MS progression and outcomes in clinical trials.

Funded by the ARSEP Foundation in France.

Shane Liddelow, PhD

New York University Langone Medical Center New York, New York Award: Harry Weaver Scholar Award Category: Biology of Glia Research Pathway: Stopping MS Estimated 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.

Research Pathway: Stopping MS Estimated Funding: \$170,162 Term: 7/1/2024-6/30/2027

Jing-Ping Lin, PhD

National Institutes of Health/National Institute of Neurological Disorders and Stroke Bethesda, Maryland Award: Career Transition Fellowship Category: Biology of Glia Research Pathway: Stopping MS Estimated Funding: \$606,065 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.

Qin Ma, PhD

University of California, San Francisco San Francisco, California Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$115,846 Term: 12/1/2023-6/30/2025

"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.

Gabrielle Macaron, MD

Centre Recherche Centre Hospitalier Université de Montreal (CRCHUM) Montreal, Canada Award: International Progressive MS Alliance Category: Rehabilitation Research Pathway: Stopping MS Estimated Funding: €98,112 Term: 1/1/2024-3/31/2025

"Comprehensive routine detection of contributors to patient-reported cognitive impairment in patients with progressive multiple sclerosis" Developing a tablet-based tool that will screen for several key factors that mya contribute to cognitive difficulties in people with MS, for clues to improving quality of life.

Joint commitment with other Progressive MS Alliance members

Roberta Magliozzi, PhD

University of Verona Verona, Italy Award: Request for Applications Category: Immunology Research Pathway: Stopping MS Estimated 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.

Aisling McMahon,

MS Society UK London, United Kingdom Award: Strategic Initiatives - 2017 Category: Human Therapy Trials/Management of MS

"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.

Vivek Mehta, MD

Washington University in St. Louis St. Louis. Missouri Award: Sylvia Lawry Physician Fellowship **Category: Diagnostic Methods**

"Sylvia Lawry Physician Fellowship Award - Vivek Mehta" A promising doctor at Washington University in St. Louis will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Julia Miglets-Nelson, PhD

American Brain Foundation Minneapolis, Minnesota Award: Strategic Initiative **Category: Immunology**

Research Pathway: Stopping MS Estimated Funding: \$300,000 Term: 9/25/2023-6/30/2025

"American Brain Foundation Harnessing Neuroinflammation Initiative" Support for the American Brain Foundation's Neuroinflammation Initiative

Elina Misicka, PhD

Case Western Reserve University Cleveland, Ohio Award: Postdoctoral Fellowship **Category: Epidemiology**

Research Pathway: Stopping MS Estimated 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.

University of California, San Francisco is investigating the role of immune T cells and B cells and

Don Bell Memorial Fellowship, Sponsored by Rabbits Unlimited, Ltd.

Carson Moseley, MD, PhD

University of California, San Francisco San Francisco, California Award: Clinician Scientist Development Award **Category: Immunology** "Mechanistic studies of MOG-specific CD4+ T cell differentiation in MOGAD" A team at the

their interaction in attacks on myelin.

Research Pathway: Stopping MS Estimated Funding: \$222,114 Term: 7/1/2022-6/30/2025

Research Pathway: Stopping MS Estimated Funding: £1,333,573 Term: 4/1/2017-6/30/2026

Research Pathway: Stopping MS Estimated Funding: \$225,500

Term: 7/1/2024-6/30/2027

Kristin O'Grady, PhD

Vanderbilt University Medical Center Nashville, Tennessee Award: Harry Weaver Scholar Award Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated Funding: \$660,712 Term: 7/1/2024-6/30/2029

"Structural and functional MRI of lumbosacral spinal cord pathology in progressive MS"

Researchers at Vanderbilt University Medical Center are testing tools to image the lower spinal cord to better understand symptoms and to track progression in people with MS.

Serhat Okar, MD

National Institutes of Health/National Institute of Neurological Disorders and Stroke Bethesda, Maryland Award: Postdoctoral Fellowship Category: Diagnostic Methods Research Pathway: Stopping MS Estimated Funding: \$233,334 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.

Darin Okuda, MD

The University of Texas Southwestern Medical Center Dallas, Texas Award: Request for Applications Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated Funding: \$299,815 Term: 10/1/2021-9/30/2024

"Improved risk stratification in radiologically isolated syndrome (RIS) through identified serum and CSF biomarkers" Researchers at UT Southwestern and collaborators are searching for a marker in the blood or spinal fluid that will help predict whether a person with incidental MRI brain lesions will go on to develop MS.

Daniel Ontaneda, MD, PhD

Cleveland Clinic Foundation Cleveland, Ohio Award: Strategic Initiatives - 2019 Category: Human Therapy Trials/Management of MS Research Pathway: Stopping MS Estimated Funding: \$1,451,679 Term: 4/1/2019-6/30/2026

"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.

Christopher Orlando, MD, MPH

University of Southern California Los Angeles, California Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

"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.

Luca Peruzzotti-Jametti, MD, PhD University of Cambridge Cambridge, Award: Request for Applications Category: Biology of Glia Research Pathway: Stopping MS Estimated Funding: \$599,422 Term: 10/1/2022-9/30/2025

Research Pathway: Stopping MS

Estimated Funding: \$150,000

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

"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.

Novalia Pishesha, PhD

Boston Children's Hospital Boston, Massachusetts Award: Career Transition Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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.

David Pitt, MD

Yale University New Haven, Connecticut Award: Request for Applications Category: Biology of Glia Research Pathway: Stopping MS Estimated 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

David Pitt, MD

Yale University New Haven, Connecticut Award: Strategic Initiative Category: Tissue/DNA Banks Research Pathway: Stopping MS Estimated 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.

Carolina Polonio, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology

"Control of T cells in EAE and MS by HIF1α-NDUFA4L2-XBP1 axis in DCs" Researchers at Washington University in St. Louis are investigating the formation of beneficial immune cells near the border between the meninges and brain and their role in the control of MS. Researchers at Washington University in St. Louis are investi

Francisco Quintana, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: International Progressive MS Alliance Category: Biology of Glia

"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

Lachlan Rash, PhD

The University of Queensland Brisbane, Australia Award: Research Grant Category: Preclinical Drug Development Research Pathway: Stopping MS Estimated Funding: \$584,879 Term: 4/1/2023-3/31/2026

Research Pathway: Stopping MS Estimated Funding: \$364,641

Research Pathway: Stopping MS

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

"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.

Daniel Reich, MD, PhD

National Institutes of Health/National Institute of Neurological Disorders and Stroke Bethesda, Maryland Award: Strategic Initiative Category: Tissue/DNA Banks

"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.

Samantha Roman, MD

Johns Hopkins UniversityEstimated Funding: \$195,000Baltimore, MarylandTerm: 7/1/2022-6/30/2025Award: Sylvia Lawry Physician FellowshipCategory: Human Therapy Trials/Management of MS**"MS Clinical Trials Fellowship"** A promising doctor at Johns Hopkins will develop the skillsinvolved in the design, implementation, and analysis of clinical trials in MS.

Research Pathway: Stopping MS Estimated Funding: \$206,011 Term: 7/1/2024-6/30/2027

Research Pathway: Stopping MS

Estimated Funding: €7,551,836

Term: 1/1/2017-12/31/2025

24

Joseph Sabatino, MD, PhD

University of California, San Francisco San Francisco, California Award: Request for Applications Category: Immunology

"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.

Farinaz Safavi, MD, PhD

National Institutes of Health Bethesda, Maryland Award: NMSS-ABF Clinician Scientist Development Award Category: Immunology

"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. *Co-Funded by the American Brain Foundation*

Shiv Saidha, MD

Johns Hopkins University Baltimore, Maryland Award: Research Grant Category: Measuring MS Disease Activity

"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.

Amber Salter, PhD, MPH

The University of Texas Southwestern Medical Center Dallas, Texas Award: Biostatistics/Informatics Junior Faculty Award Category: Epidemiology **"Investigation of MS Disease Progression Usi** Research Pathway: Stopping MS Estimated Funding: \$222,760 Term: 7/1/2021-6/30/2024

Research Pathway: Stopping MS Estimated Funding: \$289,351 Term: 7/1/2020-6/30/2024

Research Pathway: Stopping MS

Estimated Funding: \$606.133

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

Research Pathway: Stopping MS Estimated Funding: \$110,000 Term: 10/1/2023-9/30/2024

Category: Epidemiology **"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*

Joshua Sandry, PhD

Montclair State University Montclair, New Jersey Award: Research Grant Category: Rehabilitation

"Neuroimaging of Hippocampally Mediated Memory Dysfunction in Multiple Sclerosis" A team at Montclair State is exploring changes in brain structure that underlie memory and cognitive problems in people with MS.

Pascal Sati, PhD

Cedars-Sinai Medical Center Los Angeles, California Award: Research Grant Category: Diagnostic Methods Research Pathway: Stopping MS Estimated 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*

Carmen Sato-Bigbee, PhD

Virginia Commonwealth University Richmond, Virginia Award: Research Grant Category: Biology of Glia Research Pathway: Stopping MS Estimated 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.

Lucas Schirmer, MD

University of Heidelberg Heidelberg, Germany Award: Request for Applications Category: Human Genetics Research Pathway: Stopping MS Estimated 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.

"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.

Klaus Schmierer, MD, PhD, FRCP		
Queen Mary University of London		
London, United Kingdom		
Award: Strategic Initiatives - 2020		
Category: Human Therapy Trials/Management of MS		

Research Pathway: Stopping MS Estimated Funding: £100,000 Term: 10/1/2020-9/30/2025

Research Pathway: Stopping MS Estimated Funding: \$451,216 Term: 10/1/2020-9/30/2024

Teri Schreiner, MD, MPH

University of Colorado Denver Denver, Colorado Award: Request for Applications Category: Diagnostic Methods

"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

Luke Schwerdtfeger, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology

"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.

Patrick Sheehan, PhD

University of Massachusetts Medical School Worcester, Massachusetts Award: Postdoctoral Fellowship Category: Biology of Glia

Estimated Funding: \$206,011 Term: 7/1/2024-6/30/2027

Research Pathway: Stopping MS

"A molecular dissection of complement in demyelinating disease" Researchers at the University of Massachusetts Medical School are investigating the importance of "complement" proteins in the destruction of nerve connections in MS.

Alexandra Simpson, MD

Johns Hopkins University Baltimore, Maryland Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

"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*

Dinesh Keran Sivakolundu, MD, PhD	Research Pathway: Stopping MS
Weill Cornell Medical College	Estimated Funding: \$232,668
New York, New York	Term: 7/1/2024-6/30/2027
Award: Clinician Scientist Development Award	
Category: Measuring MS Disease Activity	

"Investigating the Role of Brain Lymphatics in Cognitive Decline in Multiple Sclerosis" Researchers at Weill-Cornell Medicine are investigating whether problems in clearing waste products from the brain may be related to issues with cognition experienced by many people with MS.

Estimated Funding: \$329,996 Term: 10/1/2021-9/30/2024

Research Pathway: Stopping MS

Estimated Funding: \$205,470

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

Research Pathway: Stopping MS

nating disease" Researchers at

Research Pathway: Stopping MS Estimated Funding: \$195,000 Term: 7/1/2021-6/30/2024

27

Estimated Funding: \$659,363 Term: 10/1/2022-9/30/2025

Category: Measuring MS Disease Activity "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. Paid by the Marilyn Hilton MS Research Fund

"Discovering Mechanisms And Treatments For Progressive Multiple Sclerosis" Investigating why the nerve and other cells in the brain and spinal cord are lost in MS and identifying protective

Rebecca Spain, MD, MSPH

Oregon Health & Science University Portland, Oregon Award: Strategic Initiatives - 2017 Category: Human Therapy Trials/Management of MS

Award: Career Transition Fellowship

"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.

Olaf Stuve, MD, PhD

The University of Texas Southwestern Medical Center Dallas, Texas Award: Request for Applications **Category: Diagnostic Methods**

"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

Kenneth Smith, PhD

Elias Sotirchos, MD

Baltimore, Maryland

Johns Hopkins University

University College London London, United Kingdom Award: International Progressive MS Alliance **Category: Preclinical Drug Development**

treatments that are suitable for immediate clinical trials. *Joint commitment with other Progressive MS Alliance members*

Research Pathway: Stopping MS Estimated Funding: €668,882 Term: 1/1/2024-12/31/2026

Research Pathway: Stopping MS Estimated Funding: \$1,467,875 Term: 10/1/2017-9/30/2024

Research Pathway: Stopping MS

Research Pathway: Stopping MS Estimated Funding: \$148,500 Term: 7/1/2020-6/30/2025

Syed Suhail, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology

"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.

Tomokazu Sumida, MD, PhD

Yale University New Haven, Connecticut Award: Harry Weaver Scholar Award Category: Immunology

"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.

Elizabeth Sweeney, PhD

University of Pennsylvania Philadelphia, Pennsylvania Award: Biostatistics/Informatics Junior Faculty Award Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated Funding: \$265,232 Term: 1/1/2022-6/30/2024

Research Pathway: Stopping MS

Estimated Funding: \$225,500

Term: 7/1/2024-6/30/2027

"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*

Farris Taha, MD Washington University in St. Louis St. Louis, Missouri Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

"Sylvia Lawry Physician Fellowship Award – Farris Taha" A promising doctor at Washington University in St. Louis will develop the skills involved in the design, implementation, and analysis of clinical trials in MS

Peter Tessier, PhD

Regents of the University of Michigan Ann Arbor, Michigan Award: Research Grant Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$726,000 Term: 4/1/2024-3/31/2027

Award: Research Grant Category: Immunology **"Non-invasive Delivery of Anti-inflammatory Cytokine Depots to the Myelin Sheath"** Scientists at the University of Michigan are creating novel proteins and testing their ability to stop inflammation in mice and prevent disease progression.

Research Pathway: Stopping MS Estimated Funding: \$205,470 Term: 7/1/2023-6/30/2026

Research Pathway: Stopping MS

Estimated Funding: \$624,378

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

Tyler Titcomb, PhD

The University of Iowa Iowa City, Iowa Award: Career Transition Fellowship Category: Epidemiology Research Pathway: Stopping MS Estimated 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.

Seema Tiwari-Woodruff, PhD

University of California, Riverside Riverside, California Award: Research Grant Category: Neuropathology Research Pathway: Stopping MS Estimated 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*

Karlo Toljan, MD	Research Pathway: Stopping MS
Cleveland Clinic Foundation	Estimated Funding: \$225,000
Cleveland, Ohio	Term: 7/1/2023-6/30/2026
Award: Sylvia Lawry Physician Fellowship	
Category: Human Therapy Trials/Management of MS	

"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.

Hanane Touil, PhD

Columbia University New York, New York Award: Career Transition Fellowship Category: Immunology Research Pathway: Stopping MS Estimated Funding: \$614,784 Term: 7/1/2024-6/30/2029

"Immunosenescence in Multiple Sclerosis: A pursuit of disease progression Biomarkers"

Columbia University researchers are developing immune profiles from people with MS from diverse backgrounds and ages to identify blood signatures that can guide treatment decisions.

Bruce Trapp, PhD

Cleveland Clinic Foundation Cleveland, Ohio Award: Request for Applications Category: Neuropathology Research Pathway: Stopping MS Estimated 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.

Helen Tremlett, PhD

University of British Columbia Vancouver, Canada Award: Request for Applications Category: Epidemiology Research Pathway: Stopping MS Estimated 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.

Co-funded with the MS Canada

Charidimos Tsagkas, MD, PhD

National Institutes of Health Bethesda, Maryland Award: Postdoctoral Fellowship Category: Measuring MS Disease Activity Research Pathway: Stopping MS Estimated 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.

Elizabeth Verter, MD

Icahn School of Medicine at Mount Sinai New York, New York Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS

Research Pathway: Stopping MS Estimated Funding: \$130,000 Term: 7/1/2022-6/30/2024

"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.

Akash Virupakshaiah, MD

University of California, San Francisco San Francisco, California Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS Research Pathway: Stopping MS Estimated Funding: \$75,000 Term: 7/1/2024-6/30/2025

"MS Clinical Research Fellowship" A promising doctor at the University of California, San Francisco, will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Liwei Wang, PhD

New York University Langone Medical Center New York, New York Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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.

Regents of the University of Michigan Ann Arbor, Michigan Term: 9/1/2023-8/31/2026 Award: Career Transition Fellowship Category: Biology of Glia "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

Jessica Williams, PhD

Sebastian Werneburg, PhD

Cleveland Clinic Foundation Cleveland. Ohio Award: Request for Applications Category: Biology of Glia

"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.

Thomas Willingham, PhD

Shepherd Center Atlanta, Georgia Award: International Progressive MS Alliance **Category: Diagnostic Methods**

"Real-Time Remote Patient Monitoring System to Detect the Progression of Clinical Disability in Real-World Settings in People with Progressive Multiple Sclerosis" Devising a a new way to more frequently monitor the progression of disability and changes in function in people with MS to improve ongoing treatment and clinical trials.

Joint commitment with other Progressive MS Alliance members

Cory Willis, PhD

University of Cambridge Cambridge, United Kingdom Award: Postdoctoral Fellowship Category: Biology of Glia

Research Pathway: Stopping MS Estimated 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.

Research Pathway: Stopping MS Estimated Funding: \$432,082

Term: 1/1/2024-3/31/2025

Research Pathway: Stopping MS

Estimated Funding: €98,954

Research Pathway: Stopping MS Estimated Funding: \$660,000 Term: 10/1/2022-9/30/2025

Danwei Wu, MD

Stanford University Stanford, California Award: NMSS-ABF Clinician Scientist Development Award Category: Preclinical Drug Development Research Pathway: Stopping MS Estimated 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. *Co-Funded by the American Brain Foundation and supported by the Kenrose Kitchen Table Foundation and I. David Power, III*

Soumya Yandamuri, PhD

Yale University New Haven, Connecticut Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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 nerveinsulating myelin in MS.

Dandan Yang, PhD

Brigham and Women's Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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.

Yuyi You, MD, PhD Macquarie University North Ryde, Australia Award: Research Grant Category: Neuropathology Research Pathway: Stopping MS Estimated Funding: \$543,272 Term: 4/1/2020-3/31/2025

"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.

Yevgeniy Yuzefpolskiy, PhD

Benaroya Research Institute Seattle, Washington Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Stopping MS Estimated 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.

RESTORING FUNCTION -- Reversing symptoms and improving or enhancing tissue repair/regeneration to reverse or slow MS progression and improve symptoms and enhance quality of life.

Katrina Adams, PhD

University of Notre Dame Notre Dame, Indiana Award: Career Transition Fellowship Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$463,558 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

Manzoor Bhat, PhD

The University of Texas Health Science Center at San Antonio San Antonio, Texas Award: Research Grant Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$545,884 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.

Valerie Block, PT, DPTSc

University of California, San Francisco San Francisco, California Award: Career Transition Fellowship Category: Measuring MS Disease Activity Research Pathway: Restoring Function Estimated 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, MD

University of California, San Francisco San Francisco, California Award: Harry Weaver Scholar Award Category: Human Therapy Trials/Management of MS Research Pathway: Restoring Function Estimated Funding: \$708,972 Term: 7/1/2020-6/30/2025

"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*

Riley Bove, MD

University of California, San Francisco San Francisco, California Award: Mentor Based Postdoctoral Fellowship **Category: Rehabilitation**

"Novel Digital Approaches to Rehabilitation in MS" Experienced mentors/researchers at University of California, San Francisco are training promising professionals to conduct MS rehabilitation research.

Tiffany Braley, MD

Regents of the University of Michigan Ann Arbor, Michigan Award: International Progressive MS Alliance Category: Rehabilitation

Research Pathway: Restoring Function Estimated Funding: €100,000 Term: 1/1/2024-3/31/2025

Research Pathway: Restoring Function

Research Pathway: Restoring Function

Research Pathway: Restoring Function

Estimated Funding: \$529,515

Term: 7/1/2024-6/30/2029

"Personalized circadian synchronization for fatigue and wellness in progressive MS (the Sync-Well MS Study)" Developing plans to customize and test a mobile application designed to readjust a person's internal clock to address fatigue in people with progressive MS. *Joint commitment with other Progressive MS Alliance members*

Jared Bruce, PhD University of Missouri - Kansas City Kansas, Missouri Award: Research Grant **Category: Rehabilitation**

Estimated Funding: \$756,059 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

Anne Bruestle, PhD

The Australian National University Canberra, Australia Award: International Progressive MS Alliance **Category: Measuring MS Disease Activity**

Term: 1/1/2024-3/31/2025

Estimated Funding: €96,530

"Characterising and measuring fatigue in progressive multiple sclerosis; a person centred **approach**" Identifying and measuring the underlying mechanisms of fatigue to inform its management and guide the development of new interventions to treat fatigue in people with progressive MS.

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.

Joint commitment with other Progressive MS Alliance members

Korhan Buyukturkoglu, PhD **Columbia University** New York. New York Award: Harry Weaver Scholar Award **Category: Measuring MS Disease Activity** "Thalamus Derived Radiomic Features to Explore Cognitive Impairment in People With

Research Pathway: Restoring Function Estimated Funding: \$730,849 Term: 7/1/2023-6/30/2028

Michelle Cameron, MD, PT

Oregon Health & Science University Portland, Oregon Award: Research Grant Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: \$624,956 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.

Benjamin Clayton, PhD

Case Western Reserve University Cleveland, Ohio Award: Career Transition Fellowship Category: CNS Repair Research Pathway: Restoring Function Estimated 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

Roshan das Nair, PhD

SINTEF Trondheim, Norway Award: International Progressive MS Alliance Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: €99,975 Term: 1/1/2024-3/31/2025

"Living well with Progressive MS" Conducting extensive research needed to develop and test a rehabilitation approach that tackles several symptoms at once to improve quality of life for people with progressive MS.

Joint commitment with other Progressive MS Alliance members

Gustavo Della Flora Nunes, PhD

University of Colorado Denver Denver, Colorado Award: Postdoctoral Fellowship Category: Neurophysiology Research Pathway: Restoring Function Estimated 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.

John DeLuca, PhD

Kessler Foundation Research Center West Orange, New Jersey Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation **"MS Fellowship in Neuropsychological Reha** Research Pathway: Restoring Function Estimated 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

Richard Dortch, PhD

St. Joseph's Hospital and Medical Center, Barrow Neurological Institute Phoenix, Arizona Award: Research Grant Category: CNS Repair

"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.

Dawn Ehde, PhD University of Washington Seattle, Washington Award: International Progressive MS Alliance Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: €99,143 Term: 1/1/2024-3/31/2025

Research Pathway: Restoring Function

Estimated Funding: \$725,451

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

"Adaptation of Evidence-Based Psychological Interventions for Pain in Progressive Multiple Sclerosis" Designing and testing the feasibility of a novel approach to managing pain, as a prelude to conducting a clinical trial.

Joint commitment with other Progressive MS Alliance members

Dawn Ehde, PhD

University of Washington Seattle, Washington Award: Request for Applications Category: Rehabilitation

"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.

Roger Enoka, PhD University of Colorado - Boulder Boulder, Colorado Award: Research Grant Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: \$589,208 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.

Stephen Fancy, PhD, DVM

University of California, San Francisco San Francisco, California Award: Harry Weaver Scholar Award Category: Biology of Glia Research Pathway: Restoring Function Estimated 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*

Research Pathway: Restoring Function Estimated Funding: \$600,000 Term: 5/1/2022-4/30/2025

Douglas Feinstein, PhD

University of Illinois at Chicago Chicago, Illinois Award: Research Grant Category: Preclinical Drug Development

"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

Bo Fernhall, PhD

University of Massachusetts Boston Boston, Massachusetts Award: Request for Applications Category: Physiology

"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.

Lindsay Festa, PhD

University of Pennsylvania Philadelphia, Pennsylvania Award: Career Transition Fellowship Category: CNS Repair

"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.

Peter Feys, PhD

University Hasselt Hasselt, Belgium Award: International Progressive MS Alliance Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: €100,000 Term: 1/1/2024-3/31/2025

"A multi-modal tailored and adaptive training program to reduce walking fatigability in persons with progressive MS" Designing an adaptive clinical trial where individually tailored training methods will be tested to reduce tiredness from walking (fatigability) for people with progressive MS.

Joint commitment with other Progressive MS Alliance members

Research Pathway: Restoring Function Estimated Funding: \$599,524 Term: 5/1/2022-4/30/2025

Research Pathway: Restoring Function

Estimated Funding: \$719,399

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

Research Pathway: Restoring Function Estimated Funding: \$610,065 Term: 7/1/2023-6/30/2028

Kathryn Fitzgerald, ScD

Johns Hopkins University Baltimore, Maryland Award: Career Transition Fellowship **Category: Epidemiology**

"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

Brett Fling, PhD

Colorado State University Fort Collins, Colorado Award: Harry Weaver Scholar Award Category: Rehabilitation

Research Pathway: Restoring Function Estimated 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.

Brett Fling, PhD

Colorado State University Fort Collins, Colorado Award: Mentor Based Postdoctoral Fellowship **Category: Rehabilitation**

Research Pathway: Restoring Function Estimated 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.

Nora Fritz, PhD, PT, DPT, NCS Wayne State University Detroit, Michigan Award: Research Grant **Category: Rehabilitation**

Research Pathway: Restoring Function Estimated Funding: \$599,679 Term: 7/1/2022-4/30/2025

"TRAIN-BW: Feasibility, 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, PhD, PT, DPT, NCS Wavne State University Detroit, Michigan Award: Mentor Based Postdoctoral Fellowship **Category: Rehabilitation**

Research Pathway: Restoring Function

Estimated 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

Research Pathway: Restoring Function Estimated Funding: \$412,500 Term: 7/1/2019-6/30/2024

Edward Gettings, DO

Temple University Philadelphia, Pennsylvania Award: Strategic Initiatives - 2020 Category: Health Care Delivery/ Policy

"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.

Stefan Gold, PhD

Charité - Universitätsmedizin Berlin Berlin, Germany Award: Mentor Based Postdoctoral Fellowship Category: Psychosocial Aspects of MS Estimated Funding: \$414,685 Term: 7/1/2018-6/30/2024

Research Pathway: Restoring Function

"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.

Alexander Gow, PhD

Wayne State University Detroit, Michigan Award: Research Grant Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$644,827 Term: 4/1/2024-3/31/2027

"Metabolic stress and oligodendrocyte pathophysiology" Researchers at Wayne State are looking at a novel mechanism for preventing damage and promoting repair of nerve-insulating myelin in MS.

Elizabeth Gromisch, PhD

Mount Sinai Rehabilitation Hospital Hartford, Connecticut Award: Harry Weaver Scholar Award Category: Rehabilitation **"Development and Feasibility of a F** with Multiple Sclerosis" Researcher Research Pathway: Restoring Function Estimated Funding: \$700,736 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.

Colin Grove, DPT, PhD

Emory University Atlanta, Georgia Award: Research Grant Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: \$659,896 Term: 4/1/2024-3/31/2027

"DIIVA-MS: Daily versus Intermittent Incremental Vestibulo-ocular Reflex Adaptation as a Novel Treatment for Dizziness in People with Multiple Sclerosis" A team at Emory University is testing a method for improving dizziness and balance problems in people with MS.

Research Pathway: Restoring Function Estimated Funding: \$202,811 Term: 3/1/2021-6/30/2024

Karen Ho, PhD

Clene Nanomedicine Salt Lake City, Utah Award: Fast Forward Commercial Research Category: Human Therapy Trials/Management of MS

"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.

Jingwen Hu, PhD

Johns Hopkins University Baltimore, Maryland Award: Postdoctoral Fellowship Category: CNS Repair Research Pathway: Restoring Function Estimated Funding: \$202,747 Term: 7/1/2024-6/30/2027

Research Pathway: Restoring Function

Estimated Funding: \$661,402

Term: 4/28/2023-4/28/2024

""The Role of Inflammatory Oligodendrocyte Lineages in MS" Johns Hopkins researchers are investigating the role of rogue cells in the brain that may contribute to inflammation in MS.

Jeffrey Huang, PhD

Georgetown University Washington, District of Columbia Award: Harry Weaver Scholar Award Category: CNS Repair Research Pathway: Restoring Function Estimated Funding: \$758,839 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

Abbey Hughes, PhD

Johns Hopkins University Baltimore, Maryland Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation

"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

Kouichi Ito, PhD

Rutgers, The State University of New Jersey Piscataway, New Jersey Award: Research Grant Category: Immunology Research Pathway: Restoring Function Estimated Funding: \$600,334 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.

Research Pathway: Restoring Function Estimated Funding: \$447,216 Term: 7/1/2020-6/30/2025

Larissa Jank, MD

Johns Hopkins University Baltimore, Maryland Award: Postdoctoral Fellowship Category: Preclinical Drug Development Research Pathway: Restoring Function Estimated 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

Mark Jensen, PhD

University of Washington Seattle, Washington Award: Research Grant Category: Psychosocial Aspects of MS Research Pathway: Restoring Function Estimated 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 self-hypnosis or mindfulness strategies for fatigue management on their own, without needing to work with a trained clinician.

Yasmine Kamen, PhD

Trustees of Dartmouth College Hanover, New Hampshire Award: Postdoctoral Fellowship Category: Neurophysiology Research Pathway: Restoring Function Estimated Funding: \$206,011 Term: 7/1/2024-6/30/2027

"Impact of demyelination and remyelination on axonal structural plasticity and function" Dartmouth researchers are investigating how the loss of nerve-insulating myelin and its repair affect the ability of nerve cells to communicate with each other.

Anna Kratz, PhD

Regents of the University of Michigan Ann Arbor, Michigan Award: Mentor Based Postdoctoral Fellowship Category: Psychosocial Aspects of MS Research Pathway: Restoring Function Estimated 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.

Anna Kratz, PhD

Regents of the University of Michigan Ann Arbor, Michigan Award: Strategic Initiatives - 2024 Category: Psychosocial Aspects of MS Research Pathway: Restoring Function Estimated Funding: \$16,809 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.

42

Anna Kratz, PhD

Regents of the University of Michigan Ann Arbor, Michigan Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation

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

Mable Lam, PhD

Stanford University Stanford, California Award: Career Transition Fellowship Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$614,784 Term: 7/1/2024-6/30/2029

Research Pathway: Restoring Function

Estimated Funding: \$492,176

Term: 7/1/2024-6/30/2029

"Investigating mechanisms of activity-dependent myelin growth" Researchers at Stanford University School of Medicine are investigating the importance of a process called exocytosis in stimulating myelin repair in cells grown in a dish and in mice with myelin loss.

Victoria Leavitt, PhD

Columbia University New York, New York Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation Research Pathway: Restoring Function Estimated 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*

Hyun Kyoung Lee, PhD

Baylor College of Medicine Houston, Texas Award: Research Grant Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$821,063 Term: 4/1/2020-7/31/2024

Research Pathway: Restoring Function

Estimated Funding: \$599,999 Term: 5/1/2022-4/30/2025

"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

Qing Lu, PhD

Children's Hospital Medical Center - Cincinnati Cincinnati, Ohio Award: Research Grant Category: CNS Repair

"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.

Wendy Macklin, PhD

University of Colorado Denver Denver, Colorado Award: Research Grant Category: CNS Repair Research Pathway: Restoring Function Estimated 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.

Don Mahad, MD, PhD

University of Edinburgh Edinburgh, United Kingdom Award: International Progressive MS Alliance Category: CNS Repair Research Pathway: Restoring Function Estimated Funding: €674,290 Term: 1/1/2024-12/31/2026

"Understanding and targeting neuronal responses to demyelination to protect axons in MS" Focusing on how nerve cells respond to the loss of insulating myelin and whether strategies like boosting cell energy would be protective. *Joint commitment with other Progressive MS Alliance members*

Robert McBurney, PhD

Accelerated Cure Project for MS Waltham, Massachusetts Award: Strategic Initiatives - 2019 Category: Measuring MS Disease Activity Research Pathway: Restoring Function Estimated 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.

Nara Michaelson, MD

Massachusetts General Hospital Boston, Massachusetts Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS Research Pathway: Restoring Function Estimated Funding: \$75,000 Term: 7/1/2025-6/30/2026

"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.

Robert Motl, PhD

University of Illinois at Chicago Chicago, Illinois Award: Collaborative Research Center Award Category: Rehabilitation **"Healthy Aging through LifesTyle in Multip** Research Pathway: Restoring Function Estimated 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

Robert Motl, PhD

University of Illinois at Chicago Chicago, Illinois Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation

"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

Thanh Nguyen, PhD

Weill Cornell Medical College New York, New York Award: Research Grant Category: Measuring MS Disease Activity Research Pathway: Restoring Function Estimated Funding: \$884,012 Term: 10/1/2016-6/30/2025

Research Pathway: Restoring Function

Estimated Funding: \$395,037

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

"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.

Sonia Nocera, PhD

University of California, San Francisco San Francisco, California Award: Postdoctoral Fellowship Category: Neurophysiology Research Pathway: Restoring Function Estimated Funding: \$210,938 Term: 7/1/2024-6/30/2027

"Cholinergic neuro-immune interaction that inhibits remyelination" Researchers at the University of California, San Francisco are testing whether and how immune molecules in MS lesions may inhibit repair of nerve-insulating myelin and strategies to neutralize them.

Bardia Nourbakhsh, MD

Johns Hopkins University Baltimore, Maryland Award: Harry Weaver Scholar Award Category: Human Therapy Trials/Management of Research Pathway: Restoring Function Estimated Funding: \$763,720 Term: 7/1/2022-6/30/2027

Category: Human Therapy Trials/Management of MS "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

Alyssa Nylander, MD, PhD

University of California, San Francisco San Francisco, California Award: Clinician Scientist Development Award Category: CNS Repair Research Pathway: Restoring Function Estimated 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.

Jennifer Orthmann Murphy, MD, PhD

University of Pennsylvania Philadelphia, Pennsylvania Award: Request for Applications Category: Biology of Glia

"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.

Jennifer Orthmann Murphy, MD, PhD

University of Pennsylvania Philadelphia, Pennsylvania Award: Research Grant Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$653,875 Term: 4/1/2023-3/31/2026

Research Pathway: Restoring Function

Estimated Funding: \$625,528

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

"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

Lindsay Osso, PhD

University of Colorado Denver Denver, Colorado Award: Postdoctoral Fellowship Category: CNS Repair Research Pathway: Restoring Function Estimated 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.

Davin Packer, MD, PhD

University of Colorado Anschutz Medical Campus Aurora, Colorado Award: Postdoctoral Fellowship Category: Biology of Glia **"Regional Heterogeneity of mTOR-Endosomal** Research Pathway: Restoring Function Estimated Funding: \$206,011 Term: 7/1/2024-6/30/2027

"Regional Heterogeneity of mTOR-Endosomal/Lysosomal Regulation in Oligodendroglia from the Brain and Spinal Cord During Normal Development and Inflammatory Pathology" Researchers at the University of Colorado are investigating the role of a molecule called mTOR in myelin repair in the brain compared with the spinal cord.

Vaibhav Patil, PhD

Northwestern University Chicago, Illinois Award: Postdoctoral Fellowship Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$70,619 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.

46

Amber Philp, PhD

University of California, San Francisco San Francisco, California Award: Postdoctoral Fellowship **Category: CNS Repair**

"Investigating the aging matrisome as a driver of impaired remyelination" University of California, San Francisco researchers are investigating the importance of molecules near cells that make myelin and how the molecules change during aging to find clues to repairing myelin in MS.

Lara Pilutti, PhD University of Ottawa Ottawa, Canada Award: International Progressive MS Alliance Category: Rehabilitation

"Novel pairing of brain priming and rehabilitation to restore motor and cognitive abilities in progressive multiple sclerosis" Creating a plan to test a combination of rehabilitation for specific daily tasks with brain stimulation to increase benefits and potentially increase rewiring of brain connections for people with progressive MS.

Funded by MS Canada

Matthew Plow, PhD

Case Western Reserve University Cleveland, Ohio Award: Mentor Based Postdoctoral Fellowship **Category: Rehabilitation**

Research Pathway: Restoring Function

Research Pathway: Restoring Function

Estimated Funding: \$725,913

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

"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.

Prudence Plummer, PhD, PT MGH Institute of Health Professions Boston. Massachusetts Award: Request for Applications **Category: Rehabilitation**

"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.

fellows in evaluating mobility, balance, and how attention affects movement performance and

Prudence Plummer, PhD, PT

rehabilitation outcomes.

MGH Institute of Health Professions Boston, Massachusetts Award: Mentor Based Postdoctoral Fellowship **Category: Rehabilitation** "Training Rehabilitation Scientists in Multiple Sclerosis" Mass General researchers are training

Research Pathway: Restoring Function Estimated Funding: \$481,686 Term: 7/1/2024-6/30/2029

Estimated Funding: \$451,374 Term: 7/1/2021-6/30/2026

Research Pathway: Restoring Function Estimated Funding: €99,635 Term: 1/1/2024-3/31/2025

Research Pathway: Restoring Function

Estimated Funding: \$206,011

Term: 7/1/2024-6/30/2027

Milap Sandhu, PhD, PT

Shirley Ryan AbilityLab Chicago, Illinois Award: Research Grant Category: Neurophysiology Research Pathway: Restoring Function Estimated Funding: \$718,104 Term: 4/1/2024-3/31/2027

"Efficacy and Neurophysiological Mechanisms of Acute Intermittent Hypoxia Therapy in MS" Researchers at the Shirley Ryan AbilityLab are exploring whether a treatment called acute intermittent hypoxia can improve nerve connections and upper muscle strength in people with MS.

Sumire Sato, PT, DPT, PhD

University of Florida Gainesville, Florida Award: Postdoctoral Fellowship Category: Neurophysiology Research Pathway: Restoring Function Estimated Funding: \$200,689 Term: 7/1/2023-6/30/2026

"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.

Peter Sguigna, MD

The University of Texas Southwestern Medical Center Dallas, Texas Award: International Progressive MS Alliance Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: €99,991 Term: 1/1/2024-3/31/2025

"A Phase I Study of Circadian Focused Light Therapy for Fatigue Reduction in Progressive Multiple Sclerosis" Exploring whether issues with people's internal clock leads to fatigue in those with progressive MS, and testing a potential solution involving exposure to a special type of light. *Joint commitment with other Progressive MS Alliance members*

Larry Sherman, PhD Oregon Health & Science University Portland, Oregon Award: Research Grant Category: CNS Repair Research Pathway: Restoring Function Estimated 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.

Catherine Siengsukon, PhD, PT University of Kansas Medical Center Kansas City, Kansas Award: Research Grant Category: Psychosocial Aspects of MS Research Pathway: Restoring Function Estimated Funding: \$724,801 Term: 4/1/2024-3/31/2027

"Efficacy of Cognitive Behavioral Therapy for Insomnia to Treat Insomnia Symptoms and Fatigue in Individuals with Multiple Sclerosis" Researchers at the University of Kansas Medical Center are testing whether online cognitive behavioral therapy can improve insomnia symptoms, fatigue, and quality of life in people with MS.

Jacob Sosnoff, PhD

University of Kansas Medical Center Kansas City, Kansas Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: \$353,585 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.

Seema Tiwari-Woodruff, PhD

University of California, Riverside Riverside, California Award: Fast Forward Commercial Research Category: Preclinical Drug Development Research Pathway: Restoring Function Estimated Funding: \$373,446 Term: 7/15/2020-4/30/2024

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

Seema Tiwari-Woodruff, PhD

University of California, Riverside Riverside, California Award: Research Grant Category: CNS Repair Research Pathway: Restoring Function Estimated 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

Ceren Tozlu, PhD

Weill Cornell Medical College New York, New York Award: Career Transition Fellowship Category: Neuropathology Research Pathway: Restoring Function Estimated 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.

Aaron Turner, PhD

University of Washington Seattle, Washington Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation Research Pathway: Restoring Function Estimated 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.

Anastasia Vishnevetsky, MD, MPH

Massachusetts General Hospital Boston, Massachusetts Award: Sylvia Lawry Physician Fellowship Category: Human Therapy Trials/Management of MS Research Pathway: Restoring Function Estimated Funding: \$130,000 Term: 7/1/2022-6/30/2024

"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.

Carly Wender, PhD

Kessler Foundation Research Center West Orange, New Jersey Award: Request for Applications Category: Rehabilitation Research Pathway: Restoring Function Estimated 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.

Barbara Willekens, MD, PhD

Antwerp University Hospital Edegem, Belgium Award: Research Grant Category: Human Therapy Trials/Management of MS Research Pathway: Restoring Function Estimated Funding: \$546,156 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.

Glenn Wylie, PhD

Kessler Foundation Research Center West Orange, New Jersey Award: Research Grant Category: Rehabilitation Research Pathway: Restoring Function Estimated Funding: \$722,602 Term: 4/1/2024-3/31/2027

"Establishing a clearer measure of cognitive fatigue in Multiple Sclerosis: State vs. Trait" Researchers at the Kessler Foundation in New Jersey are testing behavioral and imaging methods to measure MS-related fatigue to enable the development of solutions for this troublesome symptom.

E. Yeh, MD

The Hospital for Sick Children Toronto, Canada Award: Mentor Based Postdoctoral Fellowship Category: Rehabilitation Research Pathway: Restoring Function Estimated 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 will equip researchers with experience and knowledge to design and conduct research aimed at improving wellness in children with MS.

E. Yeh, MD The Hospital for Sick Children Toronto, Canada Award: Research Grant Category: Rehabilitation

"Physical Activity, Quality of Life and Disease Outcomes in Youth with Multiple Sclerosis: the ATOMIC (Active Teens Multiple Sclerosis) Physical Activity Research Program" A team at the Hospital for Sick Children in Toronto is testing if a smartphone app that provides tailored physical activity info/coaching can increase physical activity in pediatric MS.

E. Yeh, MD

The Hospital for Sick Children Toronto, Canada Award: Request for Applications Category: Rehabilitation

"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. With additional funding from MS Canada

With additional funding from MS Canada

Weiquan Zhu, PhD University of Utah Salt Lake City, Utah Award: Research Grant Category: CNS Repair

"Inhibiting EndoMT to Promote Remyelination and Functional Recovery in Mouse Models of Multiple Sclerosis" University of Utah researchers are investigating the role of a protein called ARF6 in blocking repair of nerve-insulating myelin in mice for clues to how to overcome it to restore function in MS.

J. Bradley Zuchero, PhD

Stanford University Stanford, California Award: Research Grant Category: Biology of Glia Research Pathway: Restoring Function Estimated Funding: \$665,435 Term: 4/1/2024-3/31/2027

"An unexplored pathway for demyelination and remyelination by surviving oligodendrocytes" Researchers at Stanford University are investigating the importance of a protein secreted by astrocyte cells that converts oligodendrocytes to a cell type that cannot repair myelin.

Research Pathway: Restoring Function Estimated Funding: \$814,511 Term: 10/1/2019-3/31/2025

Research Pathway: Restoring Function Estimated Funding: \$723,875 Term: 4/1/2024-3/31/2027

n pediatric MS. Research Pathway: Restoring Function Estimated Funding: \$134,789

Estimated Funding: \$134,789 Term: 10/1/2023-9/30/2026

ENDING MS -- Preventing new cases of MS before it occurs in the general population and in individuals at high risk for developing MS.

Frederik Bartels, MD Stanford University Stanford, California Award: Postdoctoral Fellowship Category: Infectious Agents Research Pathway: Ending MS Estimated Funding: \$241,652 Term: 8/1/2024-7/31/2027

"Characterization of Epstein-Barr Virus infected B cells in Multiple Sclerosis Patients"

Researchers at Stanford University are working to understand the role of Epstein-Barr virus as a potential cause of MS to suggest ways to treat and prevent it.

Kjetil Bjornevik, MD, PhD

Harvard School of Public Health Boston, Massachusetts Award: Request for Applications Category: Epidemiology Research Pathway: Ending MS Estimated 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*

Alexander Boyden, PhD

The University of Iowa Iowa City, Iowa Award: Request for Applications Category: Immunology Research Pathway: Ending MS Estimated Funding: \$110,000 Term: 10/1/2023-9/30/2024

"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.

John Corboy, MD University of Colorado Denver Denver, Colorado Award: Strategic Initiative Category: Tissue/DNA Banks Research Pathway: Ending MS Estimated 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.

Natalia Drosu, PhD Massachusetts General Hospital Boston, Massachusetts Award: Postdoctoral Fellowship Category: Immunology Research Pathway: Ending MS Estimated 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.

Brian Edelson, MD, PhD

Washington University School of Medicine-M St. Louis, Missouri Award: Research Grant **Category: Immunology**

Research Pathway: Ending MS Estimated 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.

Kathryn Fitzgerald, ScD

Johns Hopkins University Baltimore, Maryland Award: Harry Weaver Scholar Award **Category: Epidemiology**

Research Pathway: Ending MS Estimated Funding: \$769,382 Term: 7/1/2024-6/30/2029

"A genomics-informed pipeline to refine multiple sclerosis risk and identify drug targets for **potential repurposing**" Researchers at Johns Hopkins are undertaking an extensive cutting-edge data analysis to understand factors that may help to stop the development of MS or its progression.

Lisa Ann Gerdes, MD University Hospital LMU Munich Germany Munich, Germany Award: Request for Applications **Category: Immunology**

Research Pathway: Ending MS Estimated 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

Judith Greer, PhD The University of Queensland Brisbane, Australia Award: Request for Applications **Category: Immunology**

Research Pathway: Ending MS Estimated Funding: \$100,000 Term: 10/1/2023-9/30/2024

"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 Oueensland 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.

Daniel Hawiger, MD, PhD Saint Louis University St. Louis, Missouri Award: Request for Applications **Category: Diagnostic Methods**

Research Pathway: Ending MS Estimated 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 presymptom MS to speed diagnosis earlier in the disease.

Paid by the Marilyn Hilton MS Research Fund

Marc Horwitz, PhD

University of British Columbia Vancouver, Canada Award: Request for Applications Category: Immunology

"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 the MS Society of Canada*

Theodore Jardetzky, PhD

Stanford University Stanford, California Award: Request for Applications Category: Infectious Agents Research Pathway: Ending MS Estimated Funding: \$78,753 Term: 10/1/2023-9/30/2024

Research Pathway: Ending MS

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

Estimated Funding: \$25,594

"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, PhD Stanford University Stanford, California Award: Research Grant Category: Infectious Agents Research Pathway: Ending MS Estimated 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.

Marwa Kaisey, MD

Cedars-Sinai Medical Center Los Angeles, California Award: Request for Applications Category: Diagnostic Methods Research Pathway: Ending MS Estimated Funding: \$322,819 Term: 10/1/2021-9/30/2024

Research Pathway: Ending MS Estimated Funding: \$577,992

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

"Blood Biomarkers for Early Detection of Multiple Sclerosis" Cedars-Sinai researchers are searching for a marker in the blood that could help diagnose MS earlier, which may enable better treatment outcomes.

Allan Kermode, MD

University of Western Australia Perth, Australia Award: Request for Applications Category: Immunology

"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.

Matthew Lincoln, MD, PhD Unity Health Toronto Toronto, Canada Award: Career Transition Fellowship **Category: Human Genetics**

"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. Paid by the Marilyn Hilton MS Research Fund

Jacob Loeffler, MD

Stanford University Stanford, California Award: Clinician Scientist Development Award **Category: Immunology**

"Integrated Single Cell Analysis to Investigate CD8 T cell Responses to EBV EBNA1 and Self-Antigen Mimics in MS" Researchers at Stanford University are investigating the importance of immune T cells from people with MS that incorrectly recognize proteins in the brain and spinal cord that are similar to Epstein-Barr virus proteins.

Erin Longbrake, MD, PhD Yale University New Haven, Connecticut Award: Request for Applications **Category: Infectious Agents**

"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, MD, MPH	Research Pathway: Ending MS
Yale University	Estimated Funding: \$604,695
New Haven, Connecticut	Term: 7/1/2023-6/30/2027
Award: Harry Weaver Scholar Award	
Category: Epidemiology	

"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

Jorge Oksenberg, PhD

University of California, San Francisco San Francisco, California Award: Strategic Initiatives - 2020 Category: Tissue/DNA Banks

"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

Research Pathway: Ending MS

Estimated Funding: \$110,000

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

Research Pathway: Ending MS

Estimated Funding: \$1,552,809

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

Research Pathway: Ending MS

Estimated Funding: \$375,000

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

Research Pathway: Ending MS Estimated Funding: \$232,168 Term: 7/1/2024-6/30/2027

Michelle Pleet, PhD

National Institutes of Health/National Institute of Neurological Disorders and Stroke Bethesda, Maryland Award: Postdoctoral Fellowship Category: Neuropathology Research Pathway: Ending MS Estimated Funding: \$136,786 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.

Dalia Rotstein, MD

St. Michael's Hospital-Unity Health Toronto Toronto, Canada Award: Research Grant Category: Epidemiology Research Pathway: Ending MS Estimated 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.

Joseph Sabatino, MD, PhD

University of California, San Francisco San Francisco, California Award: Research Grant Category: Immunology Research Pathway: Ending MS Estimated 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.

Timothy Vartanian, MD, PhD

Weill Cornell Medical College New York, New York Award: Research Grant Category: Infectious Agents Research Pathway: Ending MS Estimated 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.