List of Current Research Projects Funded by the National MS Society

Sorted by Topic/Pathways to Cures

July 2023

Research Department
National Multiple Sclerosis Society
New York, NY

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Introduction
The National MS Society invests in promising research to drive Pathways to Cures 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 July 1, 2023.

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

Research Priorities: Pathways to Multiple Sclerosis Cures
The National MS Society is focused on achieving breakthroughs to cures for multiple sclerosis. Our progress will be hastened with a roadmap that describes the knowledge gaps, milestones and research priorities that will lead to cures for everyone living with MS. The roadmap was developed in consultation with scientific experts, health care providers and people affected by MS. We believe the Pathways to Cures Roadmap 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: RESTORE Pathway -- reverse symptoms, and recover function to enable full participation in society

MS can result in many different symptoms, including vision loss, pain, fatigue, sensory loss, impaired coordination, mobility, and cognitive and mood changes. Symptom severity and duration varies from person to person. Historically, rehabilitation aims to improve symptoms, with medical management
of the disease kept separate. There is data supporting the idea that restoration of function, not only symptom management, is possible in MS.

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

Goal 3: END Pathway -- No new cases of MS (prevention)
Ending MS is defined as no new cases of MS. Preventing new cases of MS will require population-based public health initiatives and individual-based interventions. While efforts will be made to advance both targets, a focus on Secondary Prevention could potentially lead to the development of approaches with benefits for people living with MS in the near term.

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

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

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

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

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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.

Jeff Bulte, PhD
Johns Hopkins University
Baltimore, Maryland
Award: RFA
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

Sachin Gadani, MD, PhD
Johns Hopkins University
Baltimore, Maryland
Award: NMSS-ABF MS Clinician Scientist 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.

Funded in part by the American Brain Foundation

Erin Gibson, PhD
Stanford University
Palo Alto, California
Award: Research Grants
Category: Biology of Glia
“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 MS Clinician Scientist 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.

Funded in part by the American Brain Foundation
Shane Liddelow, PhD  
New York University Langone Medical Center  
New York, New York  
Award: Harry Weaver Scholar Awards  
Category: Biology of Glia  
“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.

Jing-Ping Lin, PhD  
National Institutes of Health/National Institute of Neurological Disorders and Stroke  
Bethesda, Maryland  
Award: Career Transition Fellowships  
Category: Biology of Glia  
“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.

Luca Peruzzotti-Jametti, MD, PhD  
University of Cambridge  
Cambridge, United Kingdom  
Award: RFA  
Category: Biology of Glia  
“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.

David Pitt, MD  
Yale University  
New Haven, Connecticut  
Award: RFA  
Category: Biology of Glia  
“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
**Francisco Quintana, PhD**  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: International Progressive MS Alliance - Collaborative Network Center  
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*

| Award: Research Grants  
Category: Biology of Glia  
| **Molecular control of astrocytes in CNS inflammation”**  Brigham and Women’s researchers are seeking to identify a role for “astrocyte” brain cells in MS progression, for clues to stopping progression in its tracks.  
*Funded in part by the Donald C. McGraw Foundation*

| Carmen Sato-Bigbee, PhD  
Virginia Commonwealth University  
Richmond, Virginia  
Award: Research Grants  
Category: Biology of Glia  
| **“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.

| Sebastian Werneburg, PhD  
University of Massachusetts Medical School  
Worcester, Massachusetts  
Award: Career Transition Fellowships  
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*
Sebastian Werneburg, PhD
University of Michigan
Ann Arbor, Michigan
Award: Career Transition Fellowships
Category: Biology of Glia
“Molecular Dissection of Neural Circuit Disassembly by Reactive Glia in Demyelinating Disease” A team at UMichigan 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
Cleveland Clinic Foundation
Cleveland, Ohio
Award: RFA
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.

Cory Willis, PhD
University of Cambridge
Cambridge, United Kingdom
Award: Postdoctoral Fellowships
Category: Biology of Glia
“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.

Peter Calabresi, MD
Johns Hopkins University
Baltimore, Maryland
Award: Research Grants
Category: CNS Repair
“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.

Yanan Chen, MD, PhD
Loyola University - Chicago
Chicago, Illinois
Award: Career Transition Fellowships
Category: CNS Repair
“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*
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.

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.

“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.

“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.

“MR metabolic imaging of Multiple Sclerosis” Researchers at the University of California, San Francisco are developing an imaging method to assess inflammation in the brain to develop new approaches to stopping MS.
**John Chen, MD, PhD**  
Massachusetts General Hospital  
Boston, Massachusetts  
Award: Research Grants  
Category: Diagnostic Methods  

"Targeting the ubiquitous oxidative aldehyde acrolein in MS"  
Massachusetts General researchers are testing advanced imaging to track changes in MS disease activity, and test a novel treatment strategy targeting inflammation and oxidative stress.  
*Funded in part by a gift from the Kaufer Family*

**Serhat Okar, MD**  
National Institutes of Health/National Institute of Neurological Disorders and Stroke  
Bethesda, Maryland  
Award: Postdoctoral Fellowships  
Category: Diagnostic Methods  

"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.

**Laura Piccio, MD, PhD**  
Washington University School of Medicine-M  
St. Louis, Missouri  
Award: Research Grants  
Category: Diagnostic Methods  

"Cerebrospinal fluid-biomarkers-based diagnostic and prognostic models for Multiple Sclerosis"  
Washington University researchers are using powerful technology to measure spinal fluid proteins to develop biomarker profiles to predict MS course and response to treatments.

**Pascal Sati, PhD**  
Cedars-Sinai Medical Center  
Los Angeles, California  
Award: Research Grants  
Category: Diagnostic Methods  

"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*

**Teri Schreiner, MD, MPH**  
University of Colorado Denver  
Denver, Colorado  
Award: RFA  
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*
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<tr>
<th>Name</th>
<th>Institution</th>
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<td>Olaf Stuve, MD, PhD</td>
<td>The University of Texas Southwestern Medical</td>
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<td>Elina Misicka, PhD</td>
<td>Case Western Reserve University</td>
<td>$132,101</td>
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**“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

**“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.

**“Window of opportunity: examining modifiable risk factors and prodromes of Multiple Sclerosis in UK primary care datasets”** Queen Mary University London researchers are using medical records from people of different backgrounds to identify symptoms occurring before an MS diagnosis, and potentially developing tools for identifying those at the highest risk of MS.

**“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.

**“Metabolomic biomarkers of risk, severity, and progression of multiple sclerosis”** Researchers at Case Western are looking for biomarkers associated with MS risk, severity and progression to promote better treatment and prevention.
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 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

Tyler Titcomb, PhD
The University of Iowa
Iowa City, Iowa
Award: Career Transition Fellowships
Category: Epidemiology
“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.

Helen Tremlett, PhD
University of British Columbia
Vancouver, Canada
Award: RFA
Category: Epidemiology
“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 preemptive treatment.

Daniel Hartung, PharMD, MPH
Oregon State University
Corvalis, Oregon
Award: Strategic Initiatives
Category: Health Care Delivery/Policy
“Updating Cost of MS Medication” Researchers at Oregon State University are investigating reasons for the escalating costs of MS treatments.

Kathryn Fitzgerald, DSc
Johns Hopkins University
Baltimore, Maryland
Award: RFA
Category: Human Genetics
“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.
**Jorge Oksenberg, PhD**  
University of California, San Francisco  
San Francisco, California  
Award: Research Grants  
Category: Human Genetics  
“The role of Ataxin1 in autoimmune demyelination” A team at UCSF is seeking to understand the contribution of a gene known as “ATXN1” to MS risk and clinical course.

**Lucas Schirmer, MD**  
University of Heidelberg  
Mannheim, Germany  
Award: RFA  
Category: Human Genetics  
“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.

**Douglas Arnold, MD**  
McGill University  
Montreal, Canada  
Award: International Progressive MS Alliance - Collaborative Network Center  
Category: Human Therapy Trials/Management of MS  
“An MRI biomarker for disability progression for use in clinical trials” Identifying a biomarker of disability progression for use in clinical trials.

**Theron Casper, PhD**  
University of Utah  
Salt Lake City, Utah  
Award: Strategic Initiatives  
Category: Human Therapy Trials/Management of MS  
“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.

**John Ciotti, MD**  
University of South Florida  
Tampa, Florida  
Award: Sylvia Lawry Physician Fellowships  
Category: Human Therapy Trials/Management of MS  
“Sylvia Lawry Physician Fellowship” 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.
Karla Gray-Roncal, MD  
Johns Hopkins University  
Baltimore, Maryland  
Award: Sylvia Lawry Physician Fellowships  
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 Fellowships  
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.

Ellen Mowry, MD, MCR  
Johns Hopkins University  
Baltimore, Maryland  
Award: Strategic Initiatives  
Category: Human Therapy Trials/Management of MS  
“Traditional versus Early Aggressive Therapy for Multiple Sclerosis (TREAT-MS)” The Society is leveraging PCORI-funded clinical trials to support an MS biobank as a shared resource for researchers searching for biomarkers that will help elucidate predictors of long-term disability and treatment response.

MS Society UK,  
MS Society UK  
London, United Kingdom  
Award: Strategic Initiatives  
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.

Daniel Ontaneda, MD, PhD  
Cleveland Clinic Foundation  
Cleveland, Ohio  
Award: Strategic Initiatives  
Category: Human Therapy Trials/Management of MS  
“Determining the Effectiveness of early Intensive Versus Escalation approaches for the treatment of Relapsing-Remitting Multiple Sclerosis (DELIVER-MS)” The Society is leveraging PCORI-funded clinical trials to support an MS biobank as a shared resource for researchers searching for biomarkers that will help elucidate predictors of long-term disability and treatment response.
Christopher Orlando, MD, MPH
University of Southern California
Los Angeles, California
Award: Sylvia Lawry Physician Fellowships
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.

Samantha Roman, MD
Johns Hopkins University
Baltimore, Maryland
Award: Sylvia Lawry Physician Fellowships
Category: Human Therapy Trials/Management of MS
“MS Clinical Trials Fellowship” A promising doctor at Johns Hopkins will develop the skills involved in the design, implementation, and analysis of clinical trials in MS.

Alexandra Simpson, MD
Johns Hopkins University
Baltimore, Maryland
Award: Sylvia Lawry Physician Fellowships
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.

Rebecca Spain, MD, MSPH
Oregon Health & Science University
Portland, Oregon
Award: Strategic Initiatives
Category: Human Therapy Trials/Management of MS
“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.

Karlo Toljan, MD
Cleveland Clinic Foundation
Cleveland, Ohio
Award: Sylvia Lawry Physician Fellowships
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.
Elizabeth Verter, MD  
Icahn School of Medicine at Mount Sinai  
New York, New York  
Award: Sylvia Lawry Physician Fellowships  
Category: Human Therapy Trials/Management of MS  
“A 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.

Ana Anderson, PhD  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: Research Grants  
Category: Immunology  
“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.

Amit Bar-Or, MD  
University of Pennsylvania  
Philadelphia, Pennsylvania  
Award: Strategic Initiatives  
Category: Immunology  
“Linking multiple disease compartments in T1D and Multiple Sclerosis” Exploring similarities and differences in the damaging immune attacks in MS and Type 1 diabetes for clues to better therapies.

Pavan Bhargava, MD  
Johns Hopkins University  
Baltimore, Maryland  
Award: Harry Weaver Scholar Awards  
Category: Immunology  
“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

Claudia Cantoni, PhD  
St. Joseph’s Hospital and Medical Center, Barrow Neurological Institute  
Phoenix, Arizona  
Award: Career Transition Fellowships  
Category: Immunology  
“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.
Bogoljub Ciric, PhD  
**Research Pathway:** Stopping MS  
**Thomas Jefferson University**  
Philadelphia, Pennsylvania  
**Award:** Research Grants  
**Category:** Immunology  
**“The role of CSF-1R and its ligands, CSF-1 and IL-34, in CNS autoimmunity.”** Researchers at Thomas Jefferson University are investigating regulators of specific immune cells involved in nervous system tissue damage in MS.

Bonnie Dittel, PhD  
**Research Pathway:** Stopping MS  
**Versiti Blood Research Institute**  
Milwaukee, Wisconsin  
**Award:** Research Grants  
**Category:** Immunology  
**“B cell regulation in EAE/MS”** A Wisconsin team is exploring a newly identified subset of immune cells for clues to developing a cell-based therapy to stop the immune attack in MS.

Josiah Gerdts, MD, PhD  
**Research Pathway:** Stopping MS  
**University of California, San Francisco**  
San Francisco, California  
**Award:** Career Transition Fellowships  
**Category:** Immunology  
**“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  
**Research Pathway:** Stopping MS  
**Johns Hopkins University**  
Baltimore, Maryland  
**Award:** Career Transition Fellowships  
**Category:** Immunology  
**“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*

Jennifer Gommerman, PhD  
**Research Pathway:** Stopping MS  
**University of Toronto**  
Toronto, Canada  
**Award:** RFA  
**Category:** Immunology  
**“Compartmentalized inflammation in MS – A Focus on Fibroblasts”** A team at the University of Toronto and l’Université de Montréal is working to understand cell interactions in the meninges (a protective cover of the brain) and to determine if blocking these interactions will stop MS.  
*Co-funded with the MS Society of Canada*
Oksana Goroshchuk, MD, PhD  
Yale University  
New Haven, Connecticut  
Award: Postdoctoral Fellowships  
Category: Immunology  
“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.

Daniel Hawiger, MD, PhD  
Saint Louis University  
St. Louis, Missouri  
Award: Research Grants  
Category: Immunology  
“Dendritic cells orchestrated and Hopx-mediated homeostasis of regulatory T cells blocking autoimmune neuroinflammation”  
Scientists at Saint Louis University are exploring the mechanisms by which certain cells can regulate immune attacks in MS, for clues to developing targeted therapies to stop MS.

Kevan Herold, MD  
Yale University  
New Haven, Connecticut  
Award: Strategic Initiatives  
Category: Immunology  
“Analysis of antigen specific T cells in response to immune therapies in MS and T1D”  
Exploring how therapies for MS and Type 1 diabetes change immune cells and searching for blood markers to track disease development.

Dan Hu, PhD  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: Research Grants  
Category: Immunology  
“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 Fellowships  
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
**Dimitry Krementsov, PT, PhD**  
University of Vermont and State Agricultural College  
Burlington, Vermont  
Award: Research Grants  
Category: Immunology  
“Next generation systems analysis of pathogenetic mechanisms underlying CNS autoimmunity using the Collaborative Cross” A University of Vermont team is seeking to identify and validate genes that may underlie a person’s susceptibility to MS.

**Yoon-Chul Kye, PhD**  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: Postdoctoral Fellowships  
Category: Immunology  
“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.

**Qin Ma, PhD**  
University of California, San Francisco  
San Francisco, California  
Award: Postdoctoral Fellowships  
Category: Immunology  
“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.

**Booki Min, DVM, PhD**  
Northwestern University  
Chicago, Illinois  
Award: Research Grants  
Category: Immunology  
“The role of Foxp3+ regulatory T cells during glucocorticoid treatment of autoimmunity” Northwestern University researchers are exploring how high-dose steroids to treat acute MS attacks influence the activity of immune cells and how this approach to reducing inflammation may be improved.  
*Paid by a gift from the Kaufer Family and with support from the Illinois Lottery*

**Carson Moseley, MD, PhD**  
University of California, San Francisco  
San Francisco, California  
Award: Clinician Scientist Development Awards  
Category: Immunology  
“Mechanistic studies of MOG-specific CD4+ T cell differentiation in MOGAD” A team at the University of California, San Francisco is investigating the role of immune T cells and B cells and their interaction in attacks on myelin.
Laura Piccio, MD, PhD  
Washington University School of Medicine-M  
St. Louis, Missouri  
Award: Research Grants  
Category: Immunology  
“Randomized controlled trial of intermittent fasting in multiple sclerosis”  
Investigators at Washington University in St. Louis are conducting a clinical trial comparing intermittent fasting with a normal western diet in people with MS.

Novalia Pishesha, PhD  
Boston Children’s Hospital  
Boston, Massachusetts  
Award: Career Transition Fellowships  
Category: Immunology  
“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.

Farinaz Safavi, MD, PhD  
National Institutes of Health  
Bethesda, Maryland  
Award: NMSS-ABF MS Clinician Scientist 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.  

Funded in part by the American Brain Foundation

Luke Schwerdtfeger, PhD  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: Postdoctoral Fellowships  
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.

Elif Sozmen, MD, PhD  
University of California, San Francisco  
San Francisco, California  
Award: Clinician Scientist Development Awards  
Category: Immunology  
“Study the Role of Fibrinogen in Autoimmune Responses in Multiple Sclerosis”  
UCSF researchers are exploring a therapeutic strategy targeting fibrinogen, a protein associated with damage in MS.  
Paid by the Kenrose Kitchen Table Foundation and J. David Power, III
Syed Suhail, PhD  
Brigham and Women’s Hospital  
Boston, Massachusetts  
Award: Postdoctoral Fellowships  
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 Awards  
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.

Chao Wang, PhD  
Sunnybrook Research Institute  
Toronto, Canada  
Award: Career Transition Fellowships  
Category: Immunology  
“Regulation of TH17 cell function by CD5Like”  
Researchers at Brigham and Women’s Hospital in Boston are exploring how a recently discovered molecule may be used to develop a strategy for stopping the immune attack in MS in its tracks.

Liwei Wang, PhD  
New York University Langone Medical Center  
New York, New York  
Award: Postdoctoral Fellowships  
Category: Immunology  
“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.

Soumya Yandamuri, PhD  
Yale University  
New Haven, Connecticut  
Award: Postdoctoral Fellowships  
Category: Immunology  
“Isolation and characterization of myelin oligodendrocyte glycoprotein monoclonal antibodies”  
Researchers at Yale are exploring a mechanism for the damage that occurs to nerve-insulating myelin in MS.
“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.

“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.

“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.

“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.

“Does Recreational Marijuana Exposure Increase Cognitive Impairment and MRI Measures of Brain Injury in Youth and Young Adults with Multiple Sclerosis?” A team at Children’s Hospital of Philadelphia is studying the effect of recreational marijuana use on the brain and cognition in teenagers with MS.
Erin Beck, MD, PhD
Icahn School of Medicine at Mount Sinai
New York, New York
Award: Career Transition Fellowships
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.

Leigh Charvet, PhD
New York University Langone Medical Center
New York, New York
Award: RFA
Category: Measuring MS Disease Activity
“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, MD, PhD
University College London
London, United Kingdom
Award: Research Grants
Category: Measuring MS Disease Activity
“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.

Blake Dewey, PhD
Johns Hopkins University
Baltimore, Maryland
Award: Postdoctoral Fellowships
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.

Robert Fox, MD
Cleveland Clinic Foundation
Cleveland, Ohio
Award: Strategic Initiatives
Category: Measuring MS Disease Activity
“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.
<table>
<thead>
<tr>
<th>Name</th>
<th>Affiliation</th>
<th>Research Pathway</th>
<th>Estimated Funding</th>
<th>Term</th>
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<tbody>
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<td>Susan Gauthier, DO</td>
<td>Weill Cornell Medical College</td>
<td>Stopping MS</td>
<td>$656,698</td>
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<td>Award: RFA</td>
<td>Category: Measuring MS Disease Activity</td>
<td>“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.</td>
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<td>Daniel Harrison, MD</td>
<td>University of Maryland, Baltimore</td>
<td>Stopping MS</td>
<td>$586,820</td>
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<td>Award: Research Grants</td>
<td>Category: Measuring MS Disease Activity</td>
<td>“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.</td>
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<td>Robert McBurney, PhD</td>
<td>Accelerated Cure Project for MS</td>
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<td>Award: Strategic Initiatives</td>
<td>Category: Measuring MS Disease Activity</td>
<td>“COVID-19 Vaccine Response in MS Project (COVER-MS Project)” iConquerMS is gathering important information related to the COVID-19 vaccines and how they work in people affected by MS.</td>
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<td>Darin Okuda, MD</td>
<td>The University of Texas Southwestern Medical Center</td>
<td>Stopping MS</td>
<td>$299,815</td>
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<tr>
<td>Award: RFA</td>
<td>Category: Measuring MS Disease Activity</td>
<td>“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.</td>
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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.

“Understanding Post-COVID-19 Syndrome in Individuals with MS using the NARCOMS Registry”  

Researchers are investigating the impacts of long COVID and other infections in people with MS to improve care.

“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.

“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.
“Mapping multi-modal brain features to impairment severity in people with MS using machine learning” Researchers at Weill Cornell Medical College are using advanced technology to streamline the process of diagnosing and tracking MS.

“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.

“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.

“A team at Brigham and Women’s Hospital is studying the role of immune brain cells called microglia in MS 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
**Seema Tiwari-Woodruff, PhD**
University of California, Riverside
Riverside, California
Award: Research Grants
Category: Neuropathology

"**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*

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**Bruce Trapp, PhD**
Cleveland Clinic Foundation
Cleveland, Ohio
Award: RFA
Category: Neuropathology

"**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.

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**Yuyi You, MD, PhD**
Macquarie University
North Ryde, Australia
Award: Research Grants
Category: Neuropathology

"**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.

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**Myla Goldman, MD**
Virginia Commonwealth University
Richmond, Virginia
Award: Research Grants
Category: Neurophysiology

"**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.

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**Shailendra Giri, PhD**
Henry Ford Health System/Henry Ford Health Sciences Center
Detroit, Michigan
Award: Research Grants
Category: Preclinical Drug Development

"**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*
Lachlan Rash, PhD
The University of Queensland
St Lucia, Australia
Award: Research Grants
Category: Preclinical Drug Development
“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.

Danwei Wu, MD
Stanford University
Palo Alto, California
Award: NMSS-ABF MS Clinician Scientist Award
Category: Preclinical Drug Development
“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. *Funded in part by the American Brain Foundation*

Heather Wishart, PhD
Dartmouth-Hitchcock Clinic
Lebanon, New Hampshire
Award: Research Grants
Category: Psychosocial Aspects of MS
“Cognitive evaluation in MS: Expanding clinical research potential through the validation of an online testing battery” Researchers at the Geisel Medical School at Dartmouth are testing the feasibility of administering cognitive testing online, to improve the process of evaluating cognitive changes in large-scale studies in MS.

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

Joshua Sandry, PhD
Montclair State University
Montclair, New Jersey
Award: Research Grants
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.
John Corboy, MD  
University of Colorado Denver  
Denver, Colorado  
Award: Strategic Initiatives  
Category: Tissue/DNA Banks  
“Rocky Mountain MS Center Tissue Bank” Maintaining a tissue bank of specimens from people with MS for use in research.

Philip De Jager, MD, PhD  
Columbia University  
New York, New York  
Award: Strategic Initiatives  
Category: Tissue/DNA Banks  
“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.

David Pitt, MD  
Yale University  
New Haven, Connecticut  
Award: Strategic Initiatives  
Category: Tissue/DNA Banks  
“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.

Daniel Reich, MD, PhD  
National Institutes of Health/National Institute of Neurological Disorders and Stroke  
Bethesda, Maryland  
Award: Strategic Initiatives  
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.

Alessandro Didonna, PhD  
East Carolina University  
Greenville, North Carolina  
Award: International Progressive MS Alliance  
Category:  
“Tau misfolding and progression in multiple sclerosis” Using a powerful, new tool to explore the possible role of a toxic protein in the progression of MS.  
Estimated joint commitment with other Progressive MS Alliance members
**Klaus Schmierer, MD, PhD**
Queen Mary University of London
London, United Kingdom
Award: Strategic Initiatives
Category:
“**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.

**Award: Strategic Initiatives**
**Category:**
**Research Pathway:** Stopping MS
Estimated Funding: $100,000
Term: 10/1/2020-9/30/2025

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**RESCUE MS**
**Research Pathway:** Stopping MS
Estimated Funding: $350,000
Term: 10/1/2020-9/30/2025

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**Katrina Adams, PhD**
University of Notre Dame
Notre Dame, Indiana
Award: Career Transition Fellowships
Category: Biology of Glia
“**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 Grants
Category: Biology of Glia
“**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.

**Stephen Fancy, DVM, PhD**
University of California, San Francisco
San Francisco, California
Award: Harry Weaver Scholar Awards
Category: Biology of Glia
“**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*
Hyun Kyoung Lee, PhD
Baylor College of Medicine
Houston, Texas
Award: Research Grants
Category: Biology of Glia
“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

Hiroko Nobuta, PhD
Rutgers, The State University of New Jersey
Piscataway, New Jersey
Award: Career Transition Fellowships
Category: Biology of Glia
“Development of a Human Compatible Platform to Study Oligodendrocyte Biology” Researchers at the Albert Einstein College of Medicine, New York, are optimizing ways of producing human myelin-making cells to speed efforts to find strategies to repair nerve-insulating myelin and restore function in MS.

Jennifer Orthmann Murphy, MD, PhD
University of Pennsylvania
Philadelphia, Pennsylvania
Award: Research Grants
Category: Biology of Glia
“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.

Jennifer Orthmann Murphy, MD, PhD
University of Pennsylvania
Philadelphia, Pennsylvania
Award: RFA
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.

Vaibhav Patil, PhD
Northwestern University
Chicago, Illinois
Award: Postdoctoral Fellowships
Category: Biology of Glia
“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.
J. Bradley Zuchero, PhD
Stanford University
Stanford, California
Award: Harry Weaver Scholar Awards
Category: Biology of Glia
“How does the actin cytoskeleton control myelination and remyelination?” Stanford University researchers are investigating how scaffold-like structures inside cells change during the formation of myelin, for clues to stimulating myelin repair in MS.

Benjamin Clayton, PhD
Case Western Reserve University
Cleveland, Ohio
Award: Career Transition Fellowships
Category: CNS Repair
“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

Richard Dortch, PhD
St. Joseph’s Hospital and Medical Center, Barrow Neurological Institute
Phoenix, Arizona
Award: Research Grants
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.

Lindsay Festa, PhD
University of Pennsylvania
Philadelphia, Pennsylvania
Award: Career Transition Fellowships
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.

Jeffrey Huang, PhD
Georgetown University
Washington, District of Columbia
Award: Harry Weaver Scholar Awards
Category: CNS Repair
“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
Qing Lu, PhD
Children’s Hospital Medical Center - Cincinnati
Cincinnati, Ohio
Award: Research Grants
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 Grants
Category: CNS Repair
“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.

Alyssa Nylander, MD, PhD
University of California, San Francisco
San Francisco, California
Award: Clinician Scientist Development Awards
Category: CNS Repair
“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.

Lindsay Osso, PhD
University of Colorado Denver
Aurora, Colorado
Award: Postdoctoral Fellowships
Category: CNS Repair
“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.

Isobel Scarisbrick, PhD
Mayo Clinic Rochester
Rochester, Minnesota
Award: Research Grants
Category: CNS Repair
“Protease Activated Receptor Targets for Myelin Regeneration” A Mayo Clinic team is exploring whether specific molecules can be “switched off” to promote nervous system repair in MS.
Larry Sherman, PhD
Oregon Health & Science University
Beaverton, Oregon
Award: Research Grants
Category: CNS Repair
“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.

Seema Tiwari-Woodruff, PhD
University of California, Riverside
Riverside, California
Award: Research Grants
Category: CNS Repair
“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.

Seema Tiwari-Woodruff, PhD
University of California, Riverside
Riverside, California
Award: Research Grants
Category: CNS Repair
“Reprogramming proinflammatory responses to increase CXCL1 levels and axon remyelination in EAE” University of California researchers are determining how compounds that connect with estrogen docking sites work to promote repair of nerve-insulating myelin.

Kathryn Fitzgerald, DSc
Johns Hopkins University
Baltimore, Maryland
Award: Career Transition Fellowships
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.

Riley Bove, MD
University of California, San Francisco
San Francisco, California
Award: Harry Weaver Scholar Awards
Category: Human Therapy Trials/Management of MS
“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.
Myla Goldman, MD
Virginia Commonwealth University
Richmond, Virginia
Award: Research Grants
Category: Human Therapy Trials/Management of MS
“Assessment of the Clinical Importance of Insulin Resistance & Steroid-Associated Hyperglycemia in Relapsing Multiple Sclerosis” A team from Virginia Commonwealth University is exploring whether controlling blood sugar can decrease the severity and/or improve recovery from an acute MS relapse.

Karen Ho, PhD
Clene Nanomedicine
Salt Lake City, Utah
Award: Fast Forward
Category: Human Therapy Trials/Management of MS
“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.

Nara Michaelson, MD
Massachusetts General Hospital
Boston, Massachusetts
Award: Sylvia Lawry Physician Fellowships
Category: Human Therapy Trials/Management of MS
“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.

Bardia Nourbakhsh, MD
Johns Hopkins University
Baltimore, Maryland
Award: Harry Weaver Scholar Awards
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.

Anastasia Vishnevetsky, PhD
Massachusetts General Hospital
Boston, Massachusetts
Award: Sylvia Lawry Physician Fellowships
Category: Human Therapy Trials/Management of MS
“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.
Barbara Willekens, MD, PhD  
Antwerp University Hospital  
Edegem, Belgium  
Award: Research Grants  
Category: Human Therapy Trials/Management of MS  
“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.

Kouichi Ito, PhD  
Rutgers, The State University of New Jersey  
Piscataway, New Jersey  
Award: Research Grants  
Category: Immunology  
“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.

Valerie Block, DSc, PT  
University of California, San Francisco  
San Francisco, California  
Award: Career Transition Fellowships  
Category: Measuring MS Disease Activity  
“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*

Korhan Buyukturkoglu, PhD  
Columbia University  
New York, New York  
Award: Harry Weaver Scholar Awards  
Category: Measuring MS Disease Activity  
“Thalamus Derived Radiomic Features to Explore Cognitive Impairment in People With Multiple Sclerosis and At-Risk Individuals”  
Researchers at Columbia are using advanced technology to find a way to leverage clinical MRIs in screening for cognitive problems in MS.

Karen Ho, PhD  
Clene Nanomedicine  
Salt Lake City, Utah  
Award: Fast Forward  
Category: Measuring MS Disease Activity  
“A Biomarker Analysis of Patients with Relapsing Remitting Multiple Sclerosis Treated with Biocatalytic Nanocrystalline Gold (CNM-Au8)”  
Clene Nanomedicine scientists are leveraging an ongoing clinical trial to measure blood biomarkers that may help detect nervous system protection and myelin repair in MS.
Caterina Mainero, MD, PhD  
Massachusetts General Hospital  
Boston, Massachusetts  
Award: Research Grants  
Category: Measuring MS Disease Activity  
“Multimodal imaging of neuroinflammation and its contribution to cortical demyelination and regeneration in multiple sclerosis”  Researchers at Massachusetts General Hospital are developing methods to monitor cells called microglia that likely play a role in myelin repair in people with MS.

Robert McBurney, PhD  
Accelerated Cure Project for MS  
Waltham, Massachusetts  
Award: Strategic Initiatives  
Category: Measuring MS Disease Activity  
“Pathways to Cures Project Collaboration”  Collaborating with iConquerMS patient powered platform to gain input on research priorities and impacts.

Thanh Nguyen, PhD  
Weill Cornell Medical College  
New York, New York  
Award: Research Grants  
Category: Measuring MS Disease Activity  
“Quantitative MRI of lesion iron and myelin repair”  Weill Cornell Medical College researchers are testing and validating a novel imaging technique for use in determining how iron in MS lesions in the brain may affect myelin repair.

Ceren Tozlu, PhD  
Weill Cornell Medical College  
New York, New York  
Award: Career Transition Fellowships  
Category: Neuropathology  
“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.

Gustavo Della Flora Nunes, PhD  
University of Colorado Denver  
Denver, Colorado  
Award: Postdoctoral Fellowships  
Category: Neurophysiology  
“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.
Sumire Sato, PT, PhD  
University of Florida  
Gainsville, Florida  
Award: Postdoctoral Fellowships  
Category: Neurophysiology  
“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.

Douglas Feinstein, PhD  
University of Illinois at Chicago  
Chicago, Illinois  
Award: Research Grants  
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

Larissa Jank, MD  
Johns Hopkins University  
Baltimore, Maryland  
Award: Postdoctoral Fellowships  
Category: Preclinical Drug Development  
“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.

Seema Tiwari-Woodruff, PhD  
University of California, Riverside  
Riverside, California  
Award: Fast Forward  
Category: Preclinical Drug Development  
“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.

Mark Jensen, PhD  
University of Washington  
Seattle, Washington  
Award: Research Grants  
Category: Psychosocial Aspects of MS  
“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.
Anna Kratz, PhD  
Regents of the University of Michigan  
Ann Arbor, Michigan  
Award: Mentor-Based Postdoctoral Fellowships  
Category: Psychosocial Aspects of MS  
“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.

Ivan Molton, PhD  
University of Washington  
Seattle, Washington  
Award: Research Grants  
Category: Psychosocial Aspects of MS  
“Efficacy of a psychological intervention to improve ability to cope with uncertainty in MS.” University of Washington researchers are comparing traditional behavioral therapy with briefer counseling to determine how to better help people newly diagnosed with MS to cope with the uncertainty of the disease.

Michelle Cameron, PT, MD  
Oregon Health & Science University  
Portland, Oregon  
Award: Research Grants  
Category: Rehabilitation  
“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.

Chung-Yi Chiu, PhD  
University of Illinois at Urbana-Champaign  
Champaign, Illinois  
Award: Research Grants  
Category: Rehabilitation  
“Developing A Person-centered Internet-based Health Action Process Approach to Promoting Physical Activity in People with Multiple Sclerosis” Researchers at the University of Illinois are testing a program aimed at increasing physical activity among people with MS to promote healthier lifestyles.  
Funded with support from the Illinois Lottery

Silvana Costa, PhD  
Kessler Foundation Research Center  
West Orange, New Jersey  
Award: Research Grants  
Category: Rehabilitation  
“Keep an eye on the Symbol Digit Modalities Test” Kessler Foundation investigators are analyzing aspects of a cognitive test commonly used in MS, to develop more comprehensive and specific rehabilitation strategies.
John DeLuca, PhD  
Kessler Foundation Research Center  
West Orange, New Jersey  
Award: Mentor-Based Postdoctoral Fellowships  
Category: Rehabilitation  
“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*

Roger Enoka, PhD  
University of Colorado - Boulder  
Boulder, Colorado  
Award: Research Grants  
Category: Rehabilitation  
“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.

Brett Fling, PhD  
Colorado State University  
Fort Collins, Colorado  
Award: Harry Weaver Scholar Awards  
Category: Rehabilitation  
“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 Fellowships  
Category: Rehabilitation  
“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, PT, PhD  
Wayne State University  
Detroit, Michigan  
Award: Mentor-Based Postdoctoral Fellowships  
Category: Rehabilitation  
“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*
Nora Fritz, PT, PhD  
Wayne State University  
Detroit, Michigan  
Award: Research Grants  
Category: Rehabilitation  
“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.

Estimated Funding: $599,679  
Term: 7/1/2022-4/30/2025

Elizabeth Gromisch, PhD  
Mount Sinai Rehabilitation Hospital  
Hartford, Connecticut  
Award: Harry Weaver Scholar Awards  
Category: Rehabilitation  
“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.

Estimated Funding: $700,736  
Term: 7/1/2021-6/30/2026

Abbey Hughes, PhD  
Johns Hopkins University  
Baltimore, Maryland  
Award: Mentor-Based Postdoctoral Fellowships  
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.

Estimated Funding: $447,216  
Term: 7/1/2020-6/30/2025

Victoria Leavitt, PhD  
Columbia University  
New York, New York  
Award: Mentor-Based Postdoctoral Fellowships  
Category: Rehabilitation  
“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.

Estimated Funding: $489,489  
Term: 7/1/2022-6/30/2027

David Morris, PT, PhD  
University of Alabama at Birmingham  
Birmingham, Alabama  
Award: Strategic Initiatives  
Category: Rehabilitation  
“Supplemental Funding for MSSC Feinstein Study: Improving Cognition In People With Progressive Multiple Sclerosis: A Multi-Arm, Randomized, Blinded, Sham-Controlled Trial Of Cognitive Rehabilitation And Aerobic Exercise”  Supplemental funding to support additional imaging to detect brain plasticity for an international trial comparing the benefits of exercise and cognitive rehabilitation in people with MS and cognitive impairment.

Estimated Funding: $111,621  
Term: 11/1/2021-9/30/2023
Robert Motl, PhD
University of Illinois at Chicago
Chicago, Illinois
Award: Collaborative Research Center Awards
Category: Rehabilitation
“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 Fellowships
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*

Matthew Plow, PhD
Case Western Reserve University
Cleveland, Ohio
Award: Mentor-Based Postdoctoral Fellowships
Category: Rehabilitation
“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.

Jacob Sosnoff, PhD
University of Kansas Medical Center
Kansas City, Kansas
Award: Mentor-Based Postdoctoral Fellowships
Category: Rehabilitation
“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.

E. Yeh, MD
The Hospital for Sick Children
Toronto, Canada
Award: Research Grants
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.
ENDING MS -- Preventing new cases of MS before it occurs in the general population and in individuals at high risk for developing MS.

Mahmoud Pouladi, PhD
University of British Columbia
Vancouver, Canada
Award: Research Grants
Category: Biology of Glia
“Ermin in Multiple Sclerosis” Researchers in Singapore are doing lab studies to understand how a rare gene mutation related to myelin may influence the risk of developing MS.

Daniel Hawiger, MD, PhD
Saint Louis University
St. Louis, Missouri
Award: RFA
Category: Diagnostic Methods
“Detecting autoimmune potential of CD4+ T cells in the early MS disease process” Saint Louis University investigators are search for novel immune cell fingerprints that would indicate pre-symptom MS to speed diagnosis earlier in the disease.

Marwa Kaisey, MD
Cedars-Sinai Medical Center
Los Angeles, California
Award: RFA
Category: Diagnostic Methods
“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.

Kjetil Bjornevik, MD, PhD
Harvard School of Public Health
Boston, Massachusetts
Award: RFA
Category: Epidemiology
“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.

Naila Makhani, MD, MPH
Yale University
New Haven, Connecticut
Award: Harry Weaver Scholar Awards
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.
<table>
<thead>
<tr>
<th>Name</th>
<th>Award</th>
<th>Estimated Funding</th>
<th>Term</th>
<th>Research Pathway</th>
<th>Category</th>
<th>Research Project</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomas Olsson, MD, PhD</td>
<td>RFA</td>
<td>$298,040</td>
<td>10/1/2021-9/30/2023</td>
<td>Ending MS</td>
<td>Epidemiology</td>
<td>“Early detection of multiple sclerosis: a life-course epidemiological and biomarker approach” Researchers at Sweden’s Karolinska Institute are taking advantage of a depth of national medical and other data to detect MS risk factors and windows of exposure to explain how combinations of factors lead to MS. Paid by the Marilyn Hilton MS Research Fund</td>
</tr>
<tr>
<td>Dalia Rotstein, MD</td>
<td>Research Grants</td>
<td>$151,000</td>
<td>4/1/2023-3/31/2026</td>
<td>Ending MS</td>
<td>Epidemiology</td>
<td>“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.</td>
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<tr>
<td>Matthew Lincoln, MD, PhD</td>
<td>Career Transition Fellowships</td>
<td>$375,000</td>
<td>7/1/2022-6/30/2025</td>
<td>Ending MS</td>
<td>Human Genetics</td>
<td>“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.</td>
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<tr>
<td>Jorge Oksenberg, PhD</td>
<td>RFA</td>
<td>$309,680</td>
<td>10/1/2021-9/30/2023</td>
<td>Ending MS</td>
<td>Human Genetics</td>
<td>“Integration of polygenic risk scores with non-genetic risk factors to improve risk prediction in MS” UCSF scientists are combining genetic profiles with demographic and environmental variables to identify people with elevated risk for developing MS.</td>
</tr>
<tr>
<td>Manuel Comabella, MD, PhD</td>
<td>Research Grants</td>
<td>$315,090</td>
<td>5/1/2022-4/30/2024</td>
<td>Ending MS</td>
<td>Immunology</td>
<td>“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</td>
</tr>
</tbody>
</table>
Natalia Drosu, PhD  
Massachusetts General Hospital  
Boston, Massachusetts  
Award: Postdoctoral Fellowships  
Category: Immunology  
“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 Grants  
Category: Immunology  
“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.

Lisa Ann Gerdes, MD  
University Hospital LMU Munich Germany  
Munich, Germany  
Award: RFA  
Category: Immunology  
“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*

Allan Kermode, MD  
University of Western Australia  
Perth, Australia  
Award: RFA  
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.

Joseph Sabatino, MD, PhD  
University of California, San Francisco  
San Francisco, California  
Award: Research Grants  
Category: Immunology  
“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.
Michael Wilson, MD  
University of California, San Francisco  
San Francisco, California  
Award: RFA  
Category: Immunology  
“Risk Factors for Preclinical MS: The ENGEMS Cohort (Environmental and Genetic Risks for MS)”  
UCSF researchers are developing profiles of early exposures to infectious agents such as viruses to understand whether they play a role in triggering MS later.

Theodore Jardetzky, PhD  
Stanford University  
Palo Alto, California  
Award: Research Grants  
Category: Infectious Agents  
“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.

Timothy Vartanian, MD, PhD  
Weill Cornell Medical College  
New York, New York  
Award: Research Grants  
Category: Infectious Agents  
“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.

Michelle Pleet, PhD  
National Institutes of Health/National Institute of Neurological Disorders and Stroke  
Maryland, Maryland  
Award: Postdoctoral Fellowships  
Category: Neuropathology  
“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.

Jorge Okenson, PhD  
University of California, San Francisco  
San Francisco, California  
Award: Strategic Initiatives  
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.