INTRODUCTION

THE NATIONAL MULTIPLE SCLEROSIS SOCIETY

The National MS Society was organized in 1946 by people with a particular interest in multiple sclerosis, and it is chartered as a non-profit charitable agency under the laws of the State of New York. Our vision is A World Free of MS. The Society mobilizes people and resources so that everyone affected by multiple sclerosis can live their best lives as we stop MS in its tracks, restore what has been lost and end MS forever. To fulfill this mission, the Society funds cutting-edge research, drives change through advocacy, facilitates professional education, collaborates with MS organizations around the world, and provides services designed to help people with MS and their families move their lives forward.

Our Strategic Plan calls for expanding investments and worldwide collaboration to accelerate research progress toward this goal. The Society is empowered to make grants of money for use by individuals within lawfully established agencies or institutions to further its mission. The Society also emphasizes industry partnerships by providing milestone-driven drug development funding to private companies.

RESEARCH FUNDING PRINCIPLES AND PRIORITIES

Background
In January 2016, the National MS Society’s Research Programs Advisory Committee and the National Board of Directors engaged in a research priority setting exercise to identify scientific breakthroughs that would have the greatest impact for people living with MS, and the research areas that would most likely lead to these breakthroughs. These groups included MS researchers, neurologists who specialize in MS, and people who are affected by MS. Through an iterative process, research priority areas were identified and the outcomes from the January 2016 meeting provided the starting point for the development of a set of draft research priorities. A Task Force of both scientific experts and people affected by MS was recruited to refine these research priorities to achieve the greatest impact for people living with MS. The Task Force revised and enhanced the Research Priorities, and codified the Society’s Research Funding Principles. Draft statements were shared with local Society chapter boards and Society volunteer scientific peer reviewers for additional input. The Task Force and Research Programs Advisory Committee endorsed final versions of the principles and priorities in 2017.

- The Funding Principles statement outlines the Society's general research philosophy.
- The Research Priorities statement describes five topic areas of critical importance to finding solutions and a cure for MS. The Society uses these priorities to determine the relevance of research proposals we receive and to identify gaps and opportunities for targeted funding.

RESEARCH FUNDING PRINCIPLES

The complexity of MS requires a comprehensive research strategy that fuels knowledge and speeds better treatments, health care policies, and new disease and symptom management therapies so that there are treatments for everyone and so that people with MS can live their very best lives.

The Society provides grant funding, research training, and shared resources, to support the brightest scientists exploring questions underlying MS. We manage a diverse portfolio of academic and commercial research projects, provide training fellowships, foster global collaboration, and convene experts to identify strategic research priorities. Our objectives are achieved by ensuring funding of the best science regardless of geography.

Consistent application of the following principles will help accelerate progress toward a world free of MS.

1) We prioritize research that advances the Society’s strategic plan, with a focus on stopping the disease in its tracks, restoring what has been lost, and ending MS forever through a cure for all forms of MS.
2) We maintain a diverse research portfolio that includes short- and long-term investments, balances risks and rewards, and funds research globally.
INTRODUCTION

3) We balance investments in research initiated by individual investigators with investments in Society-directed research, all focused on bridging knowledge gaps, seizing opportunities and addressing research priorities.

4) We promote synergies between researchers in diverse disciplines, and develop strategic partnerships to accelerate progress.

5) We invest in all types of research including: laboratory models, human studies, population-based approaches, and data-intensive investigations that leverage both researcher and patient reported outcomes.

6) We support the full spectrum of basic, translational, and clinical research. We also strive to break down barriers to commercial development to ensure that new treatments and wellness approaches are available as quickly as possible.

7) We use independent experts to ensure that each research proposal receives a fair, competent and objective assessment of its scientific merit, relevance to MS and alignment with the Society’s research priorities.

8) We attract and support new investigators to foster a robust future workforce focused on finding solutions for MS.

9) We expect Society-funded researchers to adhere to rigorous experimental methods and reporting practices.

10) We believe that sharing data and resources enhances research and speeds scientific discovery. Data and resources developed through Society-sponsored research will be made available to other researchers after publication in an expeditious manner.

RESEARCH PRIORITY AREAS TO DRIVE BREAKTHROUGHS

The National MS Society invests in promising research to drive breakthroughs that will stop MS, restore function and end MS forever. To do this, we support collaborations and innovation, convene thought leaders, leverage new technologies and data, invest in training to ensure a robust future workforce, and learn from other diseases, funders and people living with MS. The following focus areas are critical to advancing breakthroughs that will identify solutions for people living with MS today and ultimately lead to prevention and a cure.

Define the contribution of genetics, risk factors and their modifiers to the risk for developing MS and disease course, and develop strategies to prevent, treat and cure all forms of MS

“Why do some people get MS and others don’t?”

Although tremendous progress has been made in identifying key biological pathways that contribute to MS risk, the cause is still unknown. Preventing MS for future generations requires a deep understanding of what triggers MS, how triggers lead to the development of the disease, and how to protect against it. High impact research areas include:

• Studying how pathogens, lifestyle factors and behaviors like diet and exercise, and environmental exposures impact the risk of developing MS and influence the disease course.
• Elucidating the role of the microbiome in MS risk and disease course
• Identifying additional risk variants and their epigenetic modifiers, and determining the genetic influence on clinical/imaging phenotype

Understand MS pathology and pathophysiology

“What is the cause of MS?”

Much has been learned about immune system activity in the relapsing-remitting phase of MS and this knowledge has led to the development of effective disease-modifying therapies. Less understood is the relationship between initial immune activity and progressive neurodegeneration and how innate immunity participates in the progressive phase of MS. Identifying the causes of MS, and the underlying mechanisms and biological pathways involved in MS injury to the brain and spinal cord, will expose new targets for the development of treatments to stop the damage that causes disability. High impact research areas include:

• Clarifying the destructive and protective roles of the adaptive and innate immune system, including both infiltrating and compartmentalized cells
INTRODUCTION

- Determining the causes of tissue injury at different stages of disease, and whether neurodegeneration and demyelination can be independent events in MS
- Determining how evolving MRI sequences relate to pathological changes in the central nervous system
- Leveraging big data and transformative technologies to identify and interrogate relevant biological pathways and clinical/demographic features that influence disability progression
- Ensuring access to human central nervous system tissues/cells from MS patients and healthy controls for the purpose of gaining a thorough understanding of the neuropathology of MS

Understand and treat MS progression
“How do we stop MS progression?”

MS progression often occurs early in the disease, even while the brain compensates for injury and even in people successfully treated for relapses. Progression is not easily measured and usually happens over long periods of time, making it hard to quickly detect whether a therapy is impacting the course of disease. This has made the development of therapies for progressive stages of MS a challenge. Diagnosing progressive disease based on biomarkers, in addition to clinical presentation would enable the testing of therapies earlier, promising better ways of protecting the nervous system from MS injury. High impact research areas include:

- Determining the specific pathologic underpinnings of MS progression
- Identifying objective indicators of disease activity that mark the transition to progression, measure treatment impact, and predict an individual’s course and response to therapy
- Determining mechanisms underlying the causes of progression in the absence of acute inflammation or relapses, the transition from relapsing to secondary progressive MS, and whether primary progressive and secondary progressive MS have similar biological underpinnings
- Developing better animal models that recapitulate human pathology to inform the study of the mechanisms underlying MS and progression
- Developing tools that allow better treatment decision making and personalized medicine, including therapy risks/benefits
- Testing approaches for the prevention and treatment of MS progression including repurposed/repositioned FDA-approved therapies, impact of early aggressive treatment vs. step therapy, and cell-based therapy

Identify strategies for neuroprotection and nervous system repair
“How do we repair the damage caused by MS?”

The hopes of people living with MS today rest on finding a way to stop disease worsening by preventing neurodegeneration and reversing the damage to restore lost function. The brain can repair myelin and also rewire itself around damaged areas, but in order to significantly impact disease, this natural ability needs to be enhanced. In addition to developing treatment strategies, there is a crucial need for non-invasive ways to determine quickly whether neuroprotective and repair strategies are working. High impact research areas include:

- Exploring remyelination and neuroprotective therapies (including stimulation of endogenous repair and cell-based approaches) and testing whether they have synergistic benefit with immune modulatory therapies
- Developing imaging biomarkers that detect demyelination/remyelination of white and gray matter and better outcome measures to track neuroprotection and repair
- Determining the extent that individuals’ behaviors (e.g. rehabilitation and exercise) can promote repair and plasticity

Elucidate the cause of MS symptoms, the impact of comorbidities, and identify rehabilitation, wellness behaviors and lifestyle approaches that impact disease course, symptoms and overall health
“How do we reverse symptoms and promote wellness?”

Emerging evidence suggests that wellness behaviors and lifestyle factors can influence the risk for developing MS, disease course, severity of symptoms and quality of life. Finding ways to understand and address the variable and unpredictable symptoms caused by MS will have a profound impact on people’s quality of life. In addition, people with...
MS often live with other chronic medical conditions. Understanding how these other health conditions affect MS disease course and symptoms represents an important research opportunity. Focusing on opportunities to improve the design and conduct of clinical trials and providing strategies people can incorporate to enhance their wellbeing should be emphasized. High impact research areas include:

- Studying the impact of dietary interventions, supplements, and complementary approaches on the course of disease and quality of life
- Determining the optimal study designs, regimen, and safety of exercise/physical activity and rehabilitation approaches
- Determining the effectiveness of behavioral interventions such as mindfulness, resilience, positive psychology, problem solving, yoga, stress reduction and other strategies on disease activity and emotional health
- Understanding the cause and exploring potential treatment approaches to address symptoms including pain, spasticity, incontinence, sexual dysfunction, fatigue, cognitive impairment, and symptoms caused by lack of mobility
- Revealing the potential of adaptive technologies and advanced rehabilitation strategies
- Identifying causes of depression, anxiety and other emotional health issues in MS, and the best approaches to treatment and suicide prevention
- Assessing the effects of co-morbidities, aging and symptoms on disease course and related economic/life impacts
- Testing strategies to enhance health care access and quality to improve the lives of people living with MS
ADMINISTRATION OF THE RESEARCH GRANTS AND TRAINING PROGRAMS

The intention of the Society is to encourage and support only the highest quality research and training in areas related to multiple sclerosis. For investigator-initiated grants and training awards, the primary appointment of the principal investigator must be with a not-for-profit institution, and the payee must be a not-for-profit institution. The principal investigator must be authorized to submit an application under the terms of that institution. For Society-initiated research contracts, research at for-profit organizations may be eligible for support. Specific eligibility requirements are listed in descriptions of individual grant and fellowship programs.

The administration of research grants, contracts and training programs is the responsibility and function of the Research Programs team of the National MS Society, with the aid and advice of various standing and ad hoc peer review and oversight committees and other special consultants. These advisors are selected for their knowledge within their chosen fields and for their recognized accomplishments in research. All applications for support are reviewed and evaluated by the appropriate reviewing bodies.

*The payment of grants and awards approved for the support of these programs is contingent upon the availability to the Society of the necessary funds and the compliance of grantees with Society policies and reporting requirements.*

**Peer review and funding decisions:** The Society relies on the advice of leading scientists, physicians and other experts from virtually every field related to MS to review submitted research proposals. Peer review committee members evaluate applications in terms of the significance of the project, the relevance of the project to the Society’s research priorities, the approach or methods to be used, the innovation of its concepts, the investigator’s qualifications and available resources, and suitability of the proposed budget. The Research Programs Advisory Committee (RPAC) is a senior oversight committee that reviews the recommendations of the peer review committees and makes recommendations to the Society’s CEO on which projects should receive funding. The Society’s CEO, after considering advice, makes the final decision on the projects that will be advanced for funding.

**Notification:** All applicants are notified via email of the status of their applications, and are provided access to reviewers’ comments in a timely fashion. For those approved for funding, the principal investigator will be notified electronically of the duration and amount of the award and will be provided with a budget that reflects acceptable types and amounts of expenditures for each award year. Payment for most awards will be remitted quarterly to the financial officer at the grantee institution. Pilot Research Awards are paid as a lump sum at the start of the award. For multi-year awards, payment of subsequent years is dependent upon a) availability of funds; and b) receipt, review, and approval by the Society of annual financial and research progress reports.
### REVIEW AND AWARD SCHEDULE FOR APPLICATIONS

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BEFORE YOU APPLY

REGISTERING WITH ONLINE GRANTS MANAGEMENT SYSTEM

- A grants management system called MSGrants is used for the preparation and submission of all research proposals to the Society. MSGrants can be found at https://nmss.fluxx.io. Research proposals may not be submitted to the Society in any other way.
- Compatible browsers include Chrome, Firefox, and Safari. Internet Explorer is not fully compatible and should be avoided. Check with your IT department for information on installing one of these browsers if you do not already have one.
- Passwords for accessing the site never expire, and a new password will not be needed for each cycle.
- Submission of proposals is exclusively electronic for all parts of the proposal, including institutional approval and appendix materials, and no paper copies of any part of the proposal will be sent to the Society.
- Institutional approval by your organization to submit your application is made electronically using the same online system.
- The application process itself consists of two parts, a short pre-application and the full application.

Detailed instructions for using the new system are available in the MSGrants system and on the Society’s Website: http://www.nationalmssociety.org/For-Professionals/Researchers/Apply-Online

How to Register with the Apply Online System: If you do not already have a password, you will need to register and be approved for access to the Web site. Go to https://nmss.fluxx.io/, and once you are at the login page, click on “Register Now.” Complete the online registration form and submit your registration by clicking on the words “Submit Request.” This will submit your request for access to the site to the Research Programs staff of the Society. The staff will review your registration information to verify that you are qualified to apply for funding from the Society. If approved, you will receive an e-mail message containing your login credentials within two business days.

If you have a password from our previous apply online site, you do not need to register again; however, you will need to reset your password. Go to https://nmss.fluxx.io, and once you are at the login page, click on “Reset or Create Password”. At the next screen, enter the e-mail address that you used in the old system and click on “Submit”. The system will send you an e-mail with a link to reset your password. If the system does not recognize your e-mail address, you will need to register as if you are a new user.

Once you have obtained a user ID and password, go to https://nmss.fluxx.io/ and log in at the login page. Once you log in, you will be able to see which funding opportunities are active along with the deadlines for each. You will also be able to begin the preparation of your application.

APPLICATION PROCEDURES

Consult instructions downloadable from the MSGrants grants management system for a complete description of specific grant application and approval workflows.

Timing: For application deadlines and timing of review and potential start dates, see http://www.nationalmssociety.org/For-Professionals/Researchers/Deadlines.

The Pre-Application: The Society encourages personal contact and discussion of possible ideas for proposals. In addition, in the online system this process has been formalized through the use of a “Pre-Application” step. For each funding opportunity, there is a pre-application that must be completed and submitted to the Society before the applicant can prepare a full application. For most programs, the pre-application must be submitted no later than one week prior to the posted application deadline. The pre-application is reviewed by a member of the Research Programs staff to ensure that the research idea is consistent with the mission of the Society. Once the idea is approved you will receive an automated message from the system, and you will be able to begin preparation of the full application. In some cases, Society staff may send the pre-application back to you for clarification or changes before final approval.
NOTE: Pre-applications for Health Care Delivery and Policy Research Contracts and for Career Transition Fellowships are handled differently. The pre-application for the HCDPR program includes a letter of intent in addition to the other components. The pre-application for the Career Transition Fellowships requires a summary of the proposed research along with biographical sketches of the applicant and mentor, as well as a letter of endorsement from the mentor. In both cases these pre-applications are reviewed by a peer review panel. Based on the recommendations of the panel, the applicant may or may not be invited to submit a full proposal. The full application is then due on or before the posted deadline.

**How to Complete the Pre-Application:** Once you are logged in, click on Funding Opportunities to see a list of available funding opportunities, along with information on the application deadlines. Find the funding opportunity to which you wish to apply and click on Apply Now. This will open the pre-application. Enter a title for your pre-application (this can be changed later) and complete the Eligibility Quiz. The Eligibility Quiz will establish whether you are eligible to apply for that funding opportunity. If you pass all of the eligibility criteria, the rest of the pre-application will open and you can begin to complete this step. If you fail one or more of the eligibility criteria, you will not be able to prepare and submit a pre-application for that program. You are welcome to contact Society staff if you need additional assistance. When you submit the pre-application, it will be reviewed by a program officer at the Society. You will receive notification of approval, disapproval, or the need for changes, within two business days. Read the full instructions for the funding opportunity to which you want to apply for further details. These are located in the Application Instructions section of the grantee portal.

**How to Complete the Full Application:** Once your pre-application has been approved (generally within two business days), you can log in and begin to prepare the full application. At the grantee portal, click on the Open Full Applications link, and then on Edit, to begin working on the full application. You can work on the various parts of your full application in any order you want, save your work, and return to continue working as many times as you want. Detailed instructions for completion of the full application including page limits are available in the grantee portal.

**DEVELOPING THE BUDGET**

Please refer to the program description pages for additional budgeting instructions, especially for detailed accounting procedures that pertain to phases of Career Transition Fellowships.

**Disallowed Expenses:** Funds from the award may not be used to pay for secretarial, purchasing, accounting, financial record keeping, laundry and maintenance services. With the exception of some training programs, funds may not be used to offset any tuition or other similar fees, or dues to organizations such as federations or societies. No funds shall be budgeted as “contingency funds” except by special arrangement with the Society. **Unless prior approval in writing has been obtained from the Society, expenditures are likely to be disallowed for items that were not specifically included in the budget of the award.** See specific instructions provided for individual funding programs for further details.

Applicants to the **Pilot Research Program** are discouraged from requesting funds to purchase major items of equipment, and may not use funds to support travel to conferences. Travel necessary for the conduct of the study will be considered.

**Equipment:** Permanent equipment may be requested in research proposals and will be considered only if essential to the successful execution of the proposed work. No equipment-only grants will be considered. Equipment is an article of tangible nonexpendable property having a useful life of more than one year. The definition of equipment is not driven by the cost of the item, so relatively inexpensive items that are designed to last more than one year should be considered equipment, and not supplies. Each item of equipment and its cost must be clearly detailed in the equipment section of the budget and justified in detail within the budget justification, including why said equipment is essential to the successful execution of the proposed work. There is no arbitrary cap on equipment requests, however, equipment requests that exceed 1% of the other direct costs of the proposed project will not normally be considered. Indirect costs are not allowed on equipment. In preparing the proposed budget, all equipment must be listed as equipment and not as consumable supplies. The Society does not recognize any dollar threshold to distinguish equipment vs. supplies.
Office equipment, computers, office supplies, books and journals may not be purchased with grant funds unless included in the application and specifically approved in the budget of the grant awarded. The cost of installing equipment purchased with funds of the grant is not allowed unless such funds were requested in the application and specifically approved in the budget of the grant awarded.

Equipment is intended for the sole use of the Principal Investigator, Co-Principal Investigator, project staff, and any collaborators listed as personnel on the award specifically to execute the approved scope of the project, unless cost-shared with another funding source. Title of the equipment purchased with National MS Society funds will be vested in the grantee institution conducting the research project. The grantee institution is explicitly responsible for the maintenance, control, and all associated costs of capital equipment in its custody and control.

**Indirect costs:** For several Society research funding programs, including Research Grants, Pilot Research Projects, Collaborative MS Center Awards Harry Weaver Neuroscience Scholar Awards, and Clinical Care Physician Fellowships, indirect cost will be automatically calculated by the system. Indirect cost is 10% of the direct costs, except that indirect costs are not allowed in connection with funds requested or expended for: (a) patient costs, or (b) purchase, modification or installation of equipment. Indirect costs will not be provided for grants awarded to institutions outside of the United States, or for most training awards. See specific instructions provided for individual funding programs for further details.

**Supplies:** Consumable supplies may be purchased with Society grant funds and may include any type of laboratory supplies, including purchase and maintenance of experimental animals.

**Limited Relocation Costs:** Funds to cover the cost of one-way travel to the institution where the training is provided are available but only for the investigator and not for family members or for transportation of household belongings. The relocation costs must be requested at the time the investigator is nominated, and the amount requested must be comparable to economy class transportation by air or equivalent. Relocation costs are available to awardees of the following award mechanisms: Mentor-Based Fellowship Program in Rehabilitation, Postdoctoral Fellowships, Sylvia Lawry Physician Fellowships, AAN Clinician-Scientist Fellows, Senior Faculty Awards, Institutional Clinician Training Awards, and Career Transition Fellowships.

**Travel:** Expenses for domestic or foreign travel related to the successful performance of the research may be charged to a grant only when justified in the application and within the amount specifically approved in the grant. In addition, expenses for one investigator to attend one domestic conference per year will be considered. Travel expenses whenever charged to grant funds shall be in accordance with grantee institutional policies and procedures.

**Other Expenses:** Any other expenditure directly related to the cost of conducting the proposed research may be requested in the application for a grant. However, construction or renovation costs are not permissible expenditures under any circumstances.

**Authorization (Institutional Approval):** Your application is not actually submitted to the Society until the Institutional Official approved submission of the application. The Institutional Official must be registered with the system and must be the individual designated by you in the Institutional Official section of the application. Once the principal investigator has submitted the application, a system message will be sent via e-mail to the Institutional Official stating that an application is pending authorization. The Institutional Official must then log on to the system, open the application, and complete the authorization. This must be completed prior to 5:00 PM Eastern Time on the date of the deadline.

**DURING THE AWARD PERIOD**

The following policies apply to all funding programs unless otherwise indicated below and/or in program descriptions of individual funding opportunities.

**Annual Research Report:** Unless otherwise stated in the grant agreement or contract, a report of progress made on research projects and fellowships is due within 30 days after the anniversary date, along with a copy of the annual approval letter from the IRB and/or IACUC. For fellowships, a report from the mentor is also due within 30 days after of the anniversary date. A system-generated reminder will be sent to the principal investigator approximately 60
days prior to the report due date. This progress report includes an annual Report of Expenditures (see under "Annual Financial Reports") and reprints of all published papers and preprints in press or submitted related to results accomplished under the grant or fellowship. Manuscripts will be respected as privileged communications. See special provisions related to progress reporting for Career Transition Fellowships. Payment for continued support of a research project depends on the timely receipt, review, and approval of the annual research progress report. Failure to comply with annual reporting requirements within 60 days of the anniversary date may lead to suspension of payments or termination of award. All annual reports and associated documentation will be submitted using the MSGrants system.

**Final Research Report:** A final report of the progress on research projects is due within 30 days of the termination of a grant. This report is in addition to any interim progress report that may have been included in an application to the Society for further research support. Individuals who fail to comply with final reporting requirements will not be permitted to apply to the National MS Society for research support until requirements are satisfied. The final report will be submitted using the MSGrants system. A system generated reminder will be sent to the principal investigator 60 days prior to the report due date.

**Early Termination of Award:** If a grantee, fellow or mentor elects to terminate an award prior to the date indicated in the award notice, the Society must be notified immediately in writing. An award may also be revoked by the Society after the start date. The revocation of an award may not require return of funds previously expended or committed. Grounds for revocation of an award will be deemed to exist: (1) if the investigator requests, in writing, that the award be terminated for any reason; (2) if the investigator is unable to carry out the research or training at the original institution; (3) if the sponsoring institution requests in writing that the award be terminated because of the awardee's termination of his/her academic appointment, or a mentor requests in writing that the fellowship be terminated because of unsatisfactory performance; (4) if the fellow's mentor becomes unable to continue the supervision of the fellow's training and a replacement acceptable to the Society is not named within 30 days by the sponsoring institution; (5) if, in the case of a Collaborative Center award, the base funding for the research group drops below the minimum required after the 6-month probationary period (see Collaborative Center section); (6) if the investigator fails to notify the Society of any change in his/her affiliation with the department or institution on record at the time the award was made; (7) if the investigator changes any aspect of the award from that which was originally approved by the Society, including significant changes in the specific aims of the research studies, without prior notification and approval by the Society; (8) if the progress is considered unsatisfactory after evaluation of a progress report, or the institution fails to submit a satisfactory expenditure report; (9) when annual reports of progress and recommendation for continuation are not received from the principal investigator within 60 days of the end of each award anniversary year; (10) if the investigator is found by an institutional investigation to have committed scientific misconduct or fraud; or (11) by action of the Board of Directors of the Society.

**Extension of Term:** An extension of the term of a grant without additional funds may be approved when requested and justified in writing. This is generally not permitted for Collaborative Center Awards. Extensions of term will be for either 6 or 12 months, and, except for unusual circumstances, only one extension will be given for any grant. A request for an extension must include: (1) the amount of money to be carried into the extension period; (2) a statement of why the funds were not used in the original grant period; (3) a statement of how the funds will be used during the extension; and (4) a report of the research progress and budget for the previous year, on forms provided by the Society. A request for an extension must be made at least 90 days before the termination date of a grant.

**Transfer of an Award:** The transfer of an award from one institution to another along with transfer of awardee cannot be made without prior approval in writing by the Society. For approval of such a transfer the Society requires a revised budget and updates to other information concerning the project along with signed acceptance of the new award by the new institution. For research involving human subjects and/or animals, written approval from the new institution’s Institutional Review Board and/or the Animal Care and Use Committee must be received prior to initiation of payment. In addition, the original institution must approve the release of the award, submit an acceptable report of expenditures, and return all unexpended funds to the Society before a final transfer can be made. Transfer of equipment purchased with the award and necessary for the continuation and success of the project will be transferred to the new grantee institution consistent with institutional policy, and title vested in the new institution for use by the designated principal investigator and personnel listed on the project.
In the case of **Collaborative Center Awards**, any request for transfer to a new institution must clearly describe how the team will continue to collaborate and act cohesively as a team. No interruption of financial support should be involved if the request to transfer the award is received by the Society at least 90 days prior to the anticipated date of transfer and the financial report is submitted from the original institution prior to the transfer date.

**Change of Principal Investigator/Fellow:** In most cases, a grant terminates when the principal investigator becomes unable to continue supervision of the research. However, within 30 days after such an occurrence, the original institution may request that the grant be continued with the responsibility transferred to a new principal investigator until the grant can be terminated appropriately or until a new, complete application can be submitted by the new principal investigator. Such changes cannot be effected without prior approval in writing by the Society. The proposed transfer would require a revised budget, subject to approval by the Society. Fellowships, training and Harry Weaver Neuroscience awards may not be transferred to a different individual. In the event that a fellow is unable to continue with training, the fellowship award will be terminated prematurely.

**Change of Mentor:** (applies to Postdoctoral Fellowships, Sylvia Lawry Physician Fellowships, Clinician-Scientist Fellowships, and Career Transition Fellowships) If a fellow’s mentor becomes unable to continue the supervision of the fellow’s training, a replacement may be proposed by the sponsoring institution, subject to approval by the Society. Any fellow considering a change in mentor for other reasons must notify the Society in writing to obtain prior approval. In the event that the fellow is unable to continue with the approved research project with a new mentor, the fellowship award is non-transferable and the award will be terminated prematurely.

**Leaves**

a. **Vacations:** Vacations and absences will be subject to institutional policy.

b. **Military Service:** The Society will consider reinstating an award that is interrupted by military service, provided the request is made (1) within three months of the awardee's discharge from military service, and (2) not more than three years after entering the armed forces or public health services.

c. **Maternity/Paternity Leaves:** The Society will consider an unfunded extension of term or interruption and subsequent reinstatement of an award due to maternity/paternity leave.

**Publications and Reprints:** The Society expects that the results of research will be published in appropriate journals. The responsibility for publication lies with the principal investigator. The results of any work supported by a grant from the Society may be published without being reviewed by the Society. Therefore, responsibility for direction of the work is not to be ascribed to the Society. The Society must be acknowledged in all dissemination materials (e.g., publications, scientific exhibits, scientific presentations, press releases, etc.) related to research supported in full or in part by the Society. The following acknowledgment, or its equivalent, should be used: “This investigation was supported (in part) by a [insert type of award] from the National Multiple Sclerosis Society.”

As soon as a manuscript is accepted for publication, a copy of it, with the name of the journal and the expected date of publication, should be sent by email to the Associate Vice President of Research Information (cathy.carlson@nmss.org). Please notify the Society if a press release from the institution or journal is being prepared for distribution. Manuscripts will be respected as privileged communications.

**Tykeson Conference on MS for Society Fellows and Junior Faculty Awardees:** Through a generous contribution from Mr. Donald Tykeson (active volunteer and member of the Society’s National Board of Directors), the National MS Society holds a meeting of Society’s fellows and faculty awardees on alternate years. All Society fellows and faculty awardees whose awards are active at the time of the conference are required to attend at the Society’s expense. The goal is to improve the sharing of research information among the Society’s awardees, develop a sense of community among our investigators, strengthen their commitment to MS, and establish new collaborations among these researchers. **Investigators funded under the following funding mechanisms are required to attend:** Postdoctoral Fellowships, Sylvia Lawry Physician Fellowship Award, NMSS-AAN Clinician-Scientist Fellowships, Harry Weaver Junior Faculty Awards, Mentor-Based Postdoctoral Fellowship Program in Rehabilitation Research, and Career Transition Fellowships.
BUDGETING AND ACCOUNTING
The grantee institution shall maintain complete and accurate books, records and accounts that, in reasonable detail, accurately document the use of the Award. The National MS Society shall have the right to have such books, records and accounts reviewed and audited at a mutually convenient time upon prior written notice to you.

Please refer to the program description pages for detailed accounting procedures that pertain to phases of the Career Transition Fellowships.

Rebudgeting of Funds: Transfers between and among categories of the budget approved in grants or fellowship may be made as follows: (1) transfers between personnel and consumable supplies categories may be made at the discretion of the grantee institution, but (2) no transfers may be made without prior approval in writing by the Society for patient costs, equipment costing more than $1,000, travel, indirect costs, or other items not specifically identified in the approved budget. In rebudgeting personnel funds on a research grant, the percent effort of the Principal Investigator must maintain at least a 5% level of commitment, with or without salary, to the project. Unless prior approval in writing has been obtained from the Society, expenditures are likely to be disallowed for items not specifically included in the budget of the grant awarded.

For Collaborative Center Awards, rebudgeting throughout the term of the award may be done at the discretion of the principal investigator and the co-investigators. See special rules regarding rebudgeting of funds for Harry Weaver Neuroscience Awards.

Annual Financial Reports: A brief account of the expenses for each award is due within 30 days after the anniversary date during the term of a grant. Any unexpended funds remaining at the end of each year may be carried over to the next grant year; grantees must provide an explanation and receive approval from their Society program officers to carryover excessive unexpended funds. The Society may temporarily suspend payments for projects with excessive unexpended funds.

Final Financial Reports: A full account of all expenses made for a research project is due within 90 days of the termination of the grant. Unexpended funds remaining at the end of the grant must be returned to the Society if renewal support is not awarded. If renewal support is provided, remaining funds from the previous grant will be applied to the first and, if necessary, subsequent payments of the renewal grant. Instructions for this report will be emailed to the grantee's institution prior to the end of the award. The Society is not responsible for over-expenditures of grants.

AFTER THE AWARD PERIOD

Fate of Equipment: Upon termination of the award, all equipment purchased with National MS Society funds is permanently vested in the institution at award termination.

Unexpended Funds: Because budgets in applications for grants are estimates of the funds required to perform the research indicated, unexpended funds may remain at the end of each year and at the termination of the grant. Unexpended funds remaining at the termination of the grant must be returned to the Society if renewal support is not awarded. Refund checks should be wired or mailed to the Society (Attn: Research Administration, National MS Society, 733 Third Avenue, New York, NY 10017) and should be accompanied by a copy of the financial report. If renewal support is provided, remaining funds from the previous grant will be applied to the first and, if necessary, subsequent payments of the renewal grant and the renewal support budget will be reduced accordingly.

Status Report: The Society requests that career transition fellows submit a brief statement five (5) years after completion of an award, indicating changes in professional status during the intervening period, updates in contact information and the area of current research interest, and providing a bibliography plus pdf files of published articles of work conducted during the interval.

Fellows Provide Updates: The Society periodically (every 4-5 years) conducts surveys of its past fellows to assess their career output since their postdoctoral years. To assist the Society in keeping track of our former fellows, we request that the Society be notified of changes in their professional status, professional contact information, and the area of research interest.
LEGAL AND REGULATORY POLICIES

**Bonded Financial Officer:** The Society requires that the financial officer administering grant funds be bonded. Unless otherwise indicated in the application for a grant, it is understood that such officials are bonded as a prerequisite to assumption of office.

**Research involving human subjects:** The Society will not support research involving human subjects without prior receipt of written approval of the specific research proposed from the grantee institution’s Human Institutional Review Board (IRB or other appropriate Committee). This approval must be signed by the Chairperson of the Committee, and a copy of the letter must be received by the Society on an annual basis during the funding term of the research award. In addition, all studies involving humans must be performed in accordance with the guidelines stated in the Declaration of Helsinki as described in the Code of Federal Regulations, Title 45 and Part 46 (http://www.hhs.gov/ohrp/policy/ohrpregulations.pdf).

The National Multiple Sclerosis Society supports funding of biomedical research utilizing all types of human cells. The Society also supports adherence to the strictest ethical and procedural guidelines for the use of these cells.

**Research involving animals:** For research involving animals, written approval from the grantee’s Institutional Animal Care and Use Committee (IACUC) must be received by the Society prior to the release of any funds. This approval must be signed by the Chairperson of the Committee, and a copy of the letter must be received by the Society on an annual basis during the funding term of the research award.

All biomedical research that involves the use of animals must adhere to the following principles:

- Animals shall be used in biomedical research only when no other means of obtaining scientifically sound, valid and useful results are available.
- The minimum number of appropriate animals required to obtain and validate results shall be used.
- The acquisition, care and use of animals must be in accordance with all applicable federal, state and local laws and regulations.
- Certifications must be received from research facilities prior to being approved for a research grant that the facility(ies), its researchers and employees adhere to the Animal Welfare Act, National Research Council Guide for the Care and Use of Laboratory Animals, and any appropriate U.S. Department of Agriculture or National Institutes of Health regulations and standards.
- In cases requiring the death of an animal, only the most appropriate and humane form of euthanasia shall be used consistent with the purpose of the research.

The Guide for the Care and Use of Laboratory Animals: Eighth Edition is available as a free download.

**Indemnification policy:** The National Multiple Sclerosis Society is not responsible for any claim, judgment, award, damages, settlement, negligence or malpractice arising from the Research Project or investigation related to this Award. The Awardee and Institution acknowledge responsibility for the conduct of research or investigations related to this Award, and release the MS Society from all claims or liability that may arise from the conduct of research or investigations related to this Award resulting from any act or omission on the part of the Awardee and Institution, their employees, agents or representatives to the extent allowed by applicable law.

**Invention policy and procedure:** Recipients of research grants, center awards, postdoctoral training fellowships, transition awards, faculty awards, pilot awards, research contracts, and other research support vehicles (hereinafter known as “GRANTS”) from the National Multiple Sclerosis Society shall adhere to the intellectual property policies of the grantee institution, including, if required, the assignment to the grantee institution of title in any invention work to which they have contributed. If the grantee institution has no intellectual property policy providing for such transfer, or elects to waive its rights in such intellectual property, the grantee or the grantee institution shall notify the National Multiple Sclerosis Society promptly and in sufficient time to protect the rights in such intellectual property. To the extent permitted by law, the grantee or the grantee institution shall promptly assign all rights in and to such invention to the National Multiple Sclerosis Society or to a third party designated by the National Multiple Sclerosis Society.
INTRODUCTION

All inventions made with the support, in whole or in part, with GRANTS from the National Multiple Sclerosis Society shall be reported by the grantee institution in confidence to the National Multiple Sclerosis Society within one month of their disclosure to personnel at the grantee institution responsible for such matters. Both the grantee and the grantee institution will make reasonable efforts to refrain from any action that might reasonably impair the ability to obtain patent protection for any invention, such as submitting for publication a manuscript describing the invention or offering the invention for sale or public use prior to filing an application to patent the invention.

Unless prohibited by federal law, the National Multiple Sclerosis Society shall participate in income and other economic benefits derived from any such inventions by entering into an agreement with the grantee institution at the time of such disclosure. Such agreement shall provide that income derived from the invention shall be distributed in proportion to the contributions by the National Multiple Sclerosis Society, the grantee institution and, where applicable, other sponsoring agencies, after deductions of reasonable expenses incurred in obtaining intellectual property protection.

In the event that the grantee institution elects not to pursue patent protection for an invention as to which the grantee is named as an inventor or co-inventor, or to discontinue patent prosecution or maintenance for any such invention, the grantee institution will notify the National Multiple Sclerosis Society promptly and in a reasonable time to protect the intellectual property rights in and to such invention. To the extent permitted by law, the grantee institution shall promptly assign all rights in such invention to the National Multiple Sclerosis Society or to a third party designated by the National Multiple Sclerosis Society.

Upon issuance of a patent, the grantee institution shall itself through the identification of a license or through a licensee take appropriate steps to commercialize the invention in a timely fashion. The grantee institution shall include provisions in all exclusive licenses requiring diligent commercialization of the invention, setting appropriate milestones to measure licensee performance and permitting cancellation of the license (or conversion of the license to a nonexclusive license) in the event the licensee fails to achieve the required performance levels. If the grantee institution or its licensee has not taken effective steps, within five years after a U.S. patent issues on an invention supported by Society GRANTS and administered by the grantee institution, to commercialize the invention, the grantee institution shall assign title in and to such patent to the National Multiple Sclerosis Society or its designee, unless prohibited by law or unless the grantee institution can show reasonable cause as to why it should retain title.

The grantee institution shall report annually to the National Multiple Sclerosis Society on its commercialization efforts resulting from GRANTS, including the names of current licensees, the relevant terms of any licenses that have been executed and the receipt of any royalties due under such licenses.

**Commercial research/Fast Forward:** Fast Forward is a nonprofit organization, a separate and wholly-owned subsidiary of the National Multiple Sclerosis Society, established to accelerate the development of new treatments for MS. The Society is not obliged to provide funds through Fast Forward to pursue any invention that was developed originally from support, in whole or in part, with research grants, center awards, postdoctoral training fellowships, transition awards, faculty awards, pilot awards, research contracts, and other research support vehicles from the National Multiple Sclerosis Society. In addition, the Society does not forfeit its rights to any invention that was developed originally from support, in whole or in part, with National MS Society awards if the Society does not fund a project through Fast Forward.

**Equal opportunity regulations:** The National Multiple Sclerosis Society adheres to a policy of equal opportunity in employment and requires that all United States institutions to which its research or training awards are made adhere to federally mandated equal opportunity policies; institutions outside of the U.S. must adhere to locally applicable equal opportunity policies.

**Sharing of resources:** Investigators who receive funds from the National Multiple Sclerosis Society are expected to share, in a timely manner, research resources developed with the Society’s support with qualified investigators. Examples of such resources include (but are not limited to) cell lines, antibodies, and model organisms (e.g. transgenic mice).
Clinical Trials Registration and Data Sharing: National Multiple Sclerosis Society-supported clinical trials must be registered on www.clinicaltrials.gov or another public platform, and updated as stipulated by the information platform, including submission of results. The Society expects that the Principal Investigator(s) of Society-funded clinical trials to publish the results of the trial regardless of the outcome. The publication of disappointing or negative outcomes is important for the unbiased advancement of clinical research and also is an ethical imperative, given the sacrifices of trial participants. The Society supports National Academy of Medicine recommendations for sharing clinical trials data, recognizing the need to protect the privacy and honor the consent of clinical trial participants; safeguard legitimate economic interests of sponsors; guard against invalid secondary analyses; and give researchers adequate time to analyze the data they have collected and appropriate recognition for their intellectual contributions. Applications for proposed clinical trials must include a plan for how and when data from the trial will be shared and should include data-sharing costs in budget requests, or provide an explanation for why data sharing is not possible. Awardees are expected to deposit data, including clinical trials data, into an appropriate public database, if such platform exists, upon publication of research results.

Policy on scientific misconduct and fraud: Any institution that receives funds from the National Multiple Sclerosis Society must have written policy guidelines on conflict of interest and scientific misconduct and fraud. It is the responsibility of the institution and the grantee/awardee to inform the National Multiple Sclerosis Society immediately, in writing, of any institutional investigation into the conduct of an investigator whose work is supported by Society, and to keep the Society informed in a timely manner of the progress and outcome of such investigation. A finding by the institutional investigation that the investigator was guilty of research fraud or misconduct is sufficient grounds to terminate Society support of a project, and may jeopardize future support for the investigator from the Society.