Request for Letters of Interest
Multiple Sclerosis Brain and Tissue Repositories

The National MS Society is committed to accelerating breakthroughs to fuel treatments and solutions that will stop disease progression, restore function, and end multiple sclerosis (MS) forever. The Society believes that access to high-quality human central nervous system tissue samples is vital to achieve these goals.

Purpose
The purpose of this initiative is to provide funding for one or more facilities that will oversee the collection, characterization, storage and distribution of human brain and/or spinal cord and other tissues donated by people living with MS, along with healthy controls. These tissues will be made available as a resource to qualified MS researchers. The Society’s goal is to support high-impact research that enhances our understanding of the cause of MS, accelerates the development of new and effective treatments, and provides insights that lead to breakthroughs for a cure.

Eligibility
This initiative will provide funding to tissue banks that operate within the United States. A facility can be based at an academic, non-profit, governmental, or commercial scientific or medical organization. Tissue banks that have been previous recipients of funds from the Society or elsewhere are eligible, as are new applicants. Facilities that seek to operate as a collaborative network are encouraged, though they should identify a single principal investigator (PI). Applications may include co-investigators and collaborators from their own organization or elsewhere.

Application Procedure
All applicants should review the National MS Society’s Principles and Practices for Tissue Banks (see Appendix), which was developed by the Society’s Research Resources Advisory Committee. These recommended standards should serve as a resource and guide when developing a Letter of Interest and full application.

Proposals responsive to this request will follow a 2-stage process. The first stage consists of a letter of interest for a 6-month planning award. Select applicants will be given these awards that are intended to fund activities in support of the preparation of a full proposal. Those investigators receiving a planning award will be allowed to enter the second stage and submit a full proposal for multi-year funding.
First stage: MS Brain and Tissue Bank Planning Awards

Duration: 6 months
Amount: $50,000 USD
Use of funds: convening activities, travel, and the generation of preliminary data or feasibility studies.
Application content: Applicants should submit a letter of interest, not to exceed 3 pages, that briefly describes the relevant experience of the principle investigator and key staff; plans for tissue collection/characterization/distribution; facilities available for the project; and data management.

Second stage: MS Brain and Tissue Bank Full Award

Duration: Initial award 5 years, renewable in 5-year terms thereafter
Application content: The applicant should submit a Research Plan that describes the proposed scientific and operational features of the tissue bank. The Research Plan should not exceed 20 pages (excluding references and support materials) and formatted to standard NIH rules (11 pt font, single spacing, 0.5 inch margins).

The Research Plan should have sections that include the following content:

- An overview of the proposed tissue bank’s scientific objectives and alignment with the Society’s Principles and Practices for Tissue Banks (Appendix).
- The roles for all key personnel, including leadership, oversight and governance.
- Recruitment plan including actual or projected numbers of cases/controls to be included.
- A timeline for when tissue distribution is expected to begin (if a new facility).
- A description of the procedures for how tissue will be collected, characterized and stored.
- Plans for distribution and advertisement within the MS research community.
- A description of the facilities available.

In addition to the Research Plan, applicants should include the following support materials: 1) Biographical sketches of the PI and key co-investigators; all project staff and their roles should be listed. 2) Letters of support or collaboration. 3) Current financial support of the applicant(s). 4) Additional materials in support of the application. Complete application information on additional materials that are required will be provided in the MSGrants online application portal.

Budget: Applicants should develop their own budgets and submit a detailed plan that describes the proposed operating expenses and justifies the associated costs. Allowable expenses are described in the Society’s Polices and Procedures for research grants.
Review Criteria
The scientific merit and relevance to advancing the Society’s research priorities will be assessed, along with the ability to meet criteria described in the National MS Society Tissue Bank Practices and Principles. The review committee will also consider:

- The experience of the principal investigator and proposed staff, especially in the areas of MS pathology and tissue preparation techniques;
- Feasibility of the plan to recruit and collect donations;
- Adequacy of physical facilities for maintaining tissue repository;
- Methods for establishing a tissue distribution plan.

Review Process
Proposals will be reviewed by the Society’s Research Resources Advisory Committee. Finalist(s) may be asked to host a site visit.

Key Dates
October 31, 2018: Deadline for submitting Letters of Interest
January 1st, 2019: Selected applicants awarded planning awards
July 1st, 2019: Full applications due from planning grant awardees
October 1st: Full awards initiated

Contacts
Interested applicants are strongly encouraged to speak with Society staff before submitting a Letter of Interest:

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APPENDIX
Principles and Practices for Tissue Banks

The National MS Society supports research resources to accelerate the discovery of breakthroughs for a cure to MS. One such resource is tissue banks that collect brain and other tissues donated by people with MS as well as those unaffected by the disease.

As part of an assessment of its research resource strategy, the Society recently engaged an advisory committee to recommend standards for Society-supported tissue banks. These standards would guide policy and ensure that people with MS and their families have assurance that their tissue donations are used wisely and that scientists have access to critical tissues to conduct research with maximum scientific impact for people with MS.

Recommended Standards

1. **Tissue banks will engage people affected by MS to fully give voice to their role in the facilities’ work.** People with MS should be involved in oversight and governance of the tissue bank and a plan to promote awareness should be developed and active to ensure the MS community is aware of the possibility for tissue donation.

2. **Tissue bank facilities must adhere to ethical practices and principles.** Facilities should be housed at an institution with an active Federalwide Assurance number and should follow relevant local ethical guidelines. Donors should be enrolled through informed consent or equivalent approval. Samples should be cataloged and stored coded, so that patient information is kept confidential.

3. **The tissue bank will have a clear organizational structure with appropriate internal supervision and external oversight.** The tissue banks should define organizational roles and responsibilities for: donor engagement and enrollment (for both control and MS donations), tissue collection, tissue characterization, tissue storage, and tissue distribution. There should be a clearly defined decision-making process for the distribution of tissue samples that is transparent, and the process should be established with input from external experts and people affected by MS.

4. **The leadership and/or operators of the facility must have expertise in clinical or experimental neuropathology of MS, as demonstrated by fellowship/training history and peer-reviewed publications.**
5. The tissue bank facility will follow standardized protocols for collection, characterization, and storage that are generally accepted in the tissue bank community. The leadership and operators should liaise with other MS tissue banks to ensure that they are adhering to standard operating procedures for the research community.

6. Each tissue sample will have sufficient clinical information about the donor, to maximize research value of the tissue. These should include (to the extent which they can be obtained): date and place of birth, sex, race, MS diagnosis and course, duration of disease, family history, history of treatment with disease modifying therapies, comorbidities, and MRI data, if available. These would ideally be collected and updated while the donor is alive.

7. Where feasible, and consent is granted, efforts will be made to collect a diverse array of tissue from each donor. These should include: brain and spinal cord, cerebrospinal fluid, eyeballs/optic nerves, cervical lymph nodes, spleen, whole blood, and serum and/or plasma. In addition, DNA from each donor should be acquired and made available for analysis.

8. When feasible, a rapid-autopsy procedure will be used. If rapid-autopsy is not available, best efforts will be made to minimize the post-mortem interval. In cases where the post-mortem interval was excessively long, the sample should be assayed for tissue degradation and annotated in the catalog. Quality control procedures, such as brain pH and RNA integrity, should be put in place for all tissues.

9. For brain and spinal cord, some of the tissue should be processed and stored into standardized blocks that are conducive to subsequent histopathological analysis. Other tissue blocks and samples should be preserved and stored in ways that maximize the research value of the tissue, but should include both frozen and fixed material.

10. The tissue bank will provide some basic characterization of collected tissue, when appropriate. For each MS brain, the numbers of, and locations of, lesions should be documented using either gross pathological examination, digital imaging or MRI, when feasible. The tissue bank should provide some basic histological characterization of MS tissue samples before they are sent out to users. These should include analysis of the inflammatory activity of lesions, stage of demyelinating activity, and determination of plaque type (active, inactive, smoldering, or demyelinated). Digital images of the dissected brain and immunohistochemistry of the diagnostic slides should be made accessible to tissue users as appropriate.

11. The tissue bank is expected to host and maintain a user-friendly website. The website should serve as a catalog for viewing the tissue bank’s inventory as well as a portal for requesting tissue. The website should also contain information for potential donors, and indicate the geographical catchment area for donations.
12. The tissue bank will annually report outcomes to the National MS Society. These should include: numbers of enrollments, types of donations, tissue characterizations, requests and distributions, and any peer-reviewed publications that utilized distributed tissue. Tissue requestors should be given information on how to acknowledge the tissue bank’s support by the National MS Society.

13. The tissue bank will have a plan that clarifies the issue of ownership of donated tissues, and what contingency actions should occur if tissue bank operations are interrupted or cease. These should include: a succession plan for operations, where the tissues would be located and stored, and a procedure for contacting donors and transfer of enrollments.