Request for Applications

The National Myelodysplastic Syndromes Natural History Pilot Study Funding

The NHLBI-MDS Data Coordinating Center (DCC) is releasing a request for applications (RFA) to support novel one-year pilot projects to study myelodysplastic syndromes (MDS). Investigators at US institutions are invited to apply for funds to use of our unique and expansive study resources, including biospecimens and clinical data, which were collected from a large cohort of participants confirmed to have MDS or currently at-risk for developing MDS. The DCC plans to fund up to 5 awards based on the number of applications received and the availability of funds. Application packages are due October 31, 2023 and include a short research proposal, a budget summary, and the applicant's NIH biosketch. The review process will be expedited to provide awards in a short timeframe. The awards will be made for a one-year pilot project and the key deliverable is a submission of data and a final report summarizing progress and research findings as well as future plans on how the research could be expanded with further funding.

Application Submission Instructions

IMPORTANT DATES AND DEADLINES

Application Submission

Release of the MDS Study Request for Proposals	September 1, 2023
Submission of questions from potential applicants due	September 30, 2023
Research Proposals due at 5:00 pm Eastern Time	*October 31, 2023*

Application Review/Approval Schedule

Preliminary Proposal Review Completed	November 15, 2023
Selection of Scientific Reviewers for Study Sections Completed	November 22, 2023
Application Review Completed	January 15, 2024
Notification of Awards	*January 31, 2024*

Post Award Activities

Submission of Applicant's Data Sharing Plan, DMDA, and Subcontractor Agreement	February 29, 2024
Full execution of DMDA and Subcontractor Agreement	March 31, 2024
Project Deliverables due back to the DCC	January 31, 2025

Proposals must be submitted electronically via email to:

MDS Data Coordinating Center

Email: mdsdcc@emmes.com

STUDY APPLICATION GUIDELINES

Investigators are asked to complete an MDS Study Application (see attached form) associated with this RFA. Please provide a thorough response to each section of the application and include a current version of your NIH biosketch. Suitable research plans must be relevant to the MDS field. Technical approaches may vary and could include areas such as laboratory analysis on available specimens, image analysis on digital slides, or statistical analysis of the clinical data or targeted exome sequencing data. Support from expert statisticians from the DCC and a robust bioinformatic analysis pipeline for targeted sequencing analysis are also available upon request. Please be mindful of submission procedures and deadlines provided in this announcement.

We highly recommend investigators browse the online Resource Request Portal for details on the MDS protocol design, study population, as well as details on data elements and specimens collected. Access to our Interactive Inventory Browser may be granted from the website to assist with defining a cohort of interest and to explore resource availability. The portal is located at the following URL: https://thenationalmdsstudy.net/mds-study-information

Application budgets are limited to $75,000 direct and $25,000 indirect costs for a 1-year period of performance. Each investigator will need to enter into a subcontract agreement with the DCC prior to receiving funding. A separate Data Management and Sharing Plan must also be submitted by the investigator and approved by study leadership following notification of award. The plan must outline how results from the proposed research will be shared and incorporated back into the central database to further enrich the repository. Finally, a Data and Materials Distribution Agreement (DMDA), which governs the transfer and use of materials and data, must also be signed prior to transfer of study resources. A template of the Data Management and Sharing Plan and DMDA is provided below for reference.

For questions that arise while completing and submitting the study proposal submission form, please contact us at mdsdcc@emmes.com.

APPLICATION REVIEW PROCESS SUMMARY

• Following receipt of a research application, the MDS study team will assess the proposal's completeness and perform a preliminary review of the biospecimens and associated clinical data being requested to verify feasibility of the research.

• Applications that are deemed to be feasible will then be assigned to study sections comprised of up to 3 members of the MDS Study Steering Committee selected based on the specific research focus of the proposal. Any questions or requests for additional information that a study section might have will be communicated back to the investigator by the DCC and prompt responses relayed back to the committee for further consideration. A summary of the study section scoring, comments, and recommendations will be prepared and submitted, together with the proposal, for review by the full MDS Study Steering Committee.

• The final review and funding decision of all scored applications will be made by the MDS Study Steering Committee in response to this funding announcement. Award decisions will be communicated to all investigators by January 31, 2024.

Application for Pilot Funding: NHLBI-MDS Study Resources

1. Applicant Name: _____

2. Institution: _____

3. Title: _____

4. Email Address: _____

5. Phone Number: _____

6. Mailing Address: _____

_____

7. Attach current NIH biosketch

8. Title of Proposed Research Project:

_____

9. **Research Proposal** (max length 500 words):

10. Budget Category Totals:

Personnel: _____

Supplies: _____

Other Expenses: _____

Specify:

Total Direct Cost: _____

Total Indirect Cost _____

Total Costs: _____

11. Budget justification (max length 250 words):

12. APPENDICES:

a. **Data Management and Sharing Plan Template** (pages 5-6)
b. **Data and Materials Distribution Agreement** (pages 7-13)

DATA MANAGEMENT AND SHARING PLAN

If any of the proposed research in the application involves the generation of scientific data, this application is subject to the NIH Policy for Data Management and Sharing and requires submission of a Data Management and Sharing Plan. If the proposed research in the application will generate large-scale genomic data, the Genomic Data Sharing Policy also applies and should be addressed in this Plan. Refer to the detailed instructions in the application guide for developing this plan as well as to additional guidance on sharing.nih.gov. The Plan is recommended not to exceed two pages. Text in italics should be deleted. There is no "form page" for the Data Management and Sharing Plan. The DMS Plan may be provided in the *format* shown below.

Element 1: Data Type

A. Types and amount of scientific data expected to be generated in the project:
Summarize the types and estimated amount of scientific data expected to be generated in the project,

B. Scientific data that will be preserved and shared, and the rationale for doing so:
Describe which scientific data from the project will be preserved and shared and provide the rationale for this decision.

C. Metadata, other relevant data, and associated documentation:
Briefly list the metadata, other relevant data, and any associated documentation (e.g., study protocols and data collection instruments) that will be made accessible to facilitate interpretation of the scientific data.

Element 2: Related Tools, Software and/or Code:

State whether specialized tools, software, and/or code are needed to access or manipulate shared scientific data, and if so, provide the name(s) of the needed tool(s) and software and specify how they can be accessed.

Element 3: Standards:

State what common data standards will be applied to the scientific data and associated metadata to enable interoperability of datasets and resources, and provide the name(s) of the data standards that will be applied and describe how these data standards will be applied to the scientific data generated by the research proposed in this project. If applicable, indicate that no consensus standards exist.

Element 4: Data Preservation, Access, and Associated Timelines

A. Repository where scientific data and metadata will be archived:
Provide the name of the repository(ies) where scientific data and metadata arising from the project will be archived; see Selecting a Data Repository).

B. How scientific data will be findable and identifiable:
Describe how the scientific data will be findable and identifiable, i.e., via a persistent unique identifier or other standard indexing tools.

C. When and how long the scientific data will be made available:
Describe when the scientific data will be made available to other users (i.e., no later than time of an associated publication or end of the performance period, whichever comes first) and for how long data will be available.

Element 5: Access, Distribution, or Reuse Considerations

A. Factors affecting subsequent access, distribution, or reuse of scientific data:
NIH expects that in drafting Plans, researchers maximize the appropriate sharing of scientific data. Describe and justify any applicable factors or data use limitations affecting subsequent access, distribution, or reuse of scientific data related to informed consent, privacy and confidentiality protections, and any other considerations that may limit the extent of data sharing. See Frequently Asked Questions for examples of justifiable reasons for limiting sharing of data.

B. Whether access to scientific data will be controlled:
State whether access to the scientific data will be controlled (i.e., made available by a data repository only after approval).)

C. Protections for privacy, rights, and confidentiality of human research participants:
If generating scientific data derived from humans, describe how the privacy, rights, and confidentiality of human research participants will be protected (e.g., through de-identification, Certificates of Confidentiality, and other protective measures).

Element 6: Oversight of Data Management and Sharing:
Describe how compliance with this Plan will be monitored and managed, frequency of oversight, and by whom at your institution (e.g., titles, roles).

THE NHLBI NATIONAL MYELODYSPLASTIC SYNDROMES NATURAL HISTORY STUDY
Data and Materials Distribution Agreement

NHLBI MDS STUDY Proposal # and Title

PI (Full Name)

The undersigned parties hereby enter into this Data and Materials Distribution Agreement (DMDA) as of the date specified on the final page hereof.

INTRODUCTION

The NHLBI National Myelodysplastic Syndromes (MDS) Natural History Study (NHLBI MDS STUDY) is a multisite prospective cohort study conducted across sites in the U.S. and Israel intended to establish a data and biospecimen repository to advance the understanding of MDS. The study is funded by contracts through the National Heart, Lung, and Blood Institute (NHLBI) in collaboration with the National Cancer Institute (NCI).

To protect the confidentiality and privacy of the NHLBI MDS STUDY participants and their families, investigators granted access to Data and Materials must adhere to the requirements of this DMDA. Failure to comply with this DMDA could result in its termination, denial of further access to NHLBI MDS STUDY and other NHLBI resources and may leave violators liable to legal action on the part of NHLBI MDS STUDY participants, their families, or the U.S. Government.

The undersigned parties entering into this DMDA include: **the Recipient and Recipient's Principal Investigator** (defined in the next section), the NHLBI, and the Data Coordinating Center for the NHLBI MDS STUDY, on behalf of the NHLBI MDS STUDY and under the direction of the NHLBI MDS STUDY Steering Committee.

DEFINITIONS

For purposes of this agreement,

"Genetic Analysis Data" refers to any and all information derived from genetic materials and any and all data derived from statistical analyses linking data from genetic materials with other study data.

"Data" refers to any and all study data, including laboratory, examination, and questionnaire results, and Genetic Analysis Data or images (e.g., digital slide images) and associated records either obtained directly from NHLBI MDS STUDY participants or obtained from third parties as authorized by the participants pursuant to the contracts with the NHLBI, as well as data provided to the NHLBI MDS STUDY by ancillary studies.

"**Resultant Data**" refers to data derived in whole or in part by Recipient from Data and/or Materials provided under this DMDA.

"Materials" refers to bio-samples, including but not limited to, bone marrow and blood samples, slides, and products thereof, including but not limited to, frozen bone marrow mononuclear cells (BM-MNCs), bone marrow plasma, frozen peripheral blood mononuclear cells (PBMCs), serum from peripheral blood, DNA and RNA from BM-MNCs, PBMCs, and purified CD34+ cells from bone marrow and T-cells from peripheral blood from said bio-

samples pursuant to the contracts with the NHLBI, as well as Materials provided to the NHLBI MDS STUDY by ancillary studies.

"The NHLBI MDS STUDY Investigator" is a research investigator who works with the NHLBI MDS STUDY either as an employee of the NHLBI or through a current and active contract or consulting agreement with the NHLBI or one of its contractors.

"Research Project" refers to the project described in the research proposal form.

"Recipient" refers to the institution or other entity receiving access to the NHLBI MDS STUDY Data and/or Materials requested for the Research Project identified in section 3 below as described in the research application.

"Principal Investigator (PI)" refers to the Research Project director for the Recipient.

TERMS AND CONDITIONS

It is mutually agreed as follows:

1. Materials. The NHLBI MDS STUDY and NHLBI agree to transfer to Recipient the Materials described below, including the types of samples, amount per sample, the number of individuals from whom samples are to be provided, and whether samples are nonrenewable or from a renewable resource for use by the Recipient's PI to conduct the Research Project as summarized in section 3 below.

_____

_____

2. Data. The NHLBI MDS STUDY agrees to provide Recipient with Data described as follows:

_____

_____

The NHLBI MDS STUDY will provide Recipient with the name and contact information of Study Investigators and all other investigator(s) who generated such Data.

3. Research Project.

3.1 These Materials and Data will be used by Recipient's PI solely in connection with the Research Project, as named and described in the research proposal (insert Research Project number and name below):

_____

_____

3.2 If any aspect of the Research Project, e.g., biological assays and/or genetic analyses, is to be performed by an entity other than Recipient as permitted by section 4.2, such entity is to be named below:

_____

_____

3.3 This DMDA covers only the Research Project cited in section 3.1 of this DMDA. Recipient must submit a separate DMDA for each Research Project for which Data and/or Materials are requested.

4. Non-transferability. This DMDA is not transferable.

4.1 Recipient and Recipient's PI agree that substantive changes made to the Research Project, and/or appointment by Recipient of another PI and/or transfer of Recipient's PI to another institution or other entity to complete the Research Project, require execution of a separate DMDA. Except as provided in section 4.2 below, Recipient may not distribute Data or Materials to any other individual or entity, regardless of the intended use of such Data or Materials. However, nothing in this section precludes Recipient from publishing results of the Research Project through the usual channels of scientific publication.

4.2 Recipient and Recipient's PI may transfer or cause to be transferred Materials to an institution or institutions or other entities not affiliated with Recipient but with which Recipient has either a fee-for-service or subcontract agreement or specific authorization from the NHLBI for performance of assays and/or genetic analyses for the Research Project as identified in section 3.2. A separate DMDA is not required if the derived data are either returned to the Recipient and Recipient's PI or are deposited for Recipient and Recipient's PI in a publicly accessible database authorized by the NHLBI upon completion of the assays. No Data are to be provided to such institutions or other entities unless a separate DMDA has been approved by the NHLBI MDS STUDY and NHLBI.

5. Conduct of Research Project. Recipient's PI is responsible for the conduct of the Research Project and shall be responsible for assuring that any co-investigator(s) comply with the terms of this DMDA.

6. Publication. Prompt publication of the results of the Research Project is encouraged. The NHLBI MDS STUDY and NHLBI request that the Recipient's PI provide to the NHLBI MDS STUDY Data Coordinating Center (mdscontact@emmes.com) a copy of any abstract ten (10) days in advance of submission for publication or presentation and any manuscript or other disclosure document thirty (30) days in advance of submission for publication, in order to permit review and comment and ensure compliance with the **confidentiality** requirements of this DMDA.

7. Acknowledgments. Recipient and Recipient's PI agree to acknowledge the contribution of the NHLBI MDS STUDY and its Federal contract number(s) in **any oral or written** publication or presentation related to the use of data, images, specimens **and/or study materials**.

7.1 Collaborations. If a manuscript resulting from the Research Project has Study Investigators as co-authors, then the manuscript will be reviewed by the NHLBI MDS STUDY.

7.1.a If the manuscript is approved by the NHLBI MDS STUDY, the Recipient and Recipient's PI agree to include the following language in an acknowledgment.

"The National MDS Natural History study has been supported by US Federal Government Contracts HHSN268201400003I and HHSN268201400002I from the National Heart Lung and Blood Institute and additional funding by the National Cancer Institute to clinical centers. This manuscript has been reviewed by the NHLBI MDS STUDY for scientific content and consistency of data interpretation with previous NHLBI MDS STUDY publications."

7.1.b If the manuscript is not approved by the NHLBI MDS STUDY, the Recipient and Recipient's PI may proceed to publish without inclusion of Study Investigators as co-authors provided that they agree to include the following language in an acknowledgment.

"The National MDS Natural History study has been supported by US Federal Government Contracts HHSN268201400003I and HHSN268201400002I from the National Heart Lung

and Blood Institute and additional funding by the National Cancer Institute to clinical centers. This manuscript was not approved by the NHLBI MDS STUDY. The opinions and conclusions contained in this publication are solely those of the authors, and are not endorsed by the NHLBI MDS STUDY or the NHLBI and should not be assumed to reflect the opinions or conclusions of either."

7.2 Other Studies. If the Research Project does not involve collaboration with Study Investigators, then the Recipient and Recipient's PI agree to include the following language in an acknowledgment.

"The National MDS Natural History study has been supported by US Federal Government Contracts HHSN268201400003I and HHSN268201400002I from the National Heart Lung and Blood Institute and additional funding by the National Cancer Institute to clinical centers. This manuscript was not prepared in collaboration with investigators of the NHLBI MDS STUDY and does not necessarily reflect the opinions or conclusions of the NHLBI MDS STUDY or the NHLBI."

7.3 Ancillary Study Investigator Acknowledgments**.** If Data include data provided to the NHLBI MDS STUDY by ancillary study investigators, Recipient and Recipient's PI also agree to acknowledge their contribution in any and all oral and written presentations, disclosures, and publications resulting from any and all analyses of such Data.

8. Non-Identification. Recipient and Recipient's PI agree that Materials and/or Data will not be used, either alone or in conjunction with any other information, in any effort to determine the individual identities of any of the participants from whom Data and/or Materials were obtained or derived.

9. Use Limited to Research Project. Recipient and Recipient's PI agree that Data, Materials, their progeny, or derivatives thereof will not be used in any experiments or procedures unless said experiments or procedures are disclosed and approved as part of the Research Project.

10. Use in Human Experimentation Prohibited. Recipient and Recipient's PI agree that Materials, their progeny, and derivatives thereof will not be used in human experimentation of any kind.

11. Compliance with Participants' Informed Consent. Recipient and Recipient's PI agree that Data and/or Materials, their progeny, and derivatives thereof will not be used for any purpose contrary to a participant's applicable signed informed consent document(s). Recipient and Recipient's PI agree to consult with Study Investigators and ascertain, specifically and in detail, the terms and conditions of applicable NHLBI MDS STUDY informed consent documents.

12. No Distribution; Avoidance of Waste. Recipient and Recipient's PI agree to retain control over Data, Materials and their progeny, and derivatives thereof. Recipient and Recipient's PI further agree not to transfer Data, Materials and their progeny, and derivatives thereof, with or without charge, to any other entity or individual, except for Data and/or Materials as provided for in section 4.2 above. Recipient and Recipient's PI agree to make reasonable efforts to avoid contamination or waste of Materials.

13. Resultant Data to be Provided to the NHLBI MDS STUDY and NHLBI. Recipient and Recipient's PI agree to provide The NHLBI MDS STUDY with a report every twelve (12) months during the term of this DMDA. The report shall include a description of the activities performed and Resultant Data obtained during the twelve (12) months before the reporting date. Recipient and Recipient's PI agree that the NHLBI MDS STUDY and NHLBI, in accordance with the NIH Data Sharing Agreement and NHLBI Policy for Data Sharing from Clinical Trials and Epidemiologic Studies, may distribute all such Resultant Data through established NHLBI procedures to all institutions requesting access for their identified qualified scientific investigators to such Resultant Data and that submit to NHLBI a signed DMDA comparable to this DMDA. Recipient and Recipient's PI will provide all Resultant Data in the precise electronic format specified by NHLBI or the NHLBI MDS STUDY.

14. Costs/No Warranties. Cost for Materials distribution will be determined on a case by case basis. Costs are subject to change following written notification from the NHLBI MDS STUDY with the approval of NHLBI. NO WARRANTIES, EXPRESS OR IMPLIED, ARE OFFERED AS TO THE MERCHANTABILITY OR FITNESS FOR ANY PURPOSE OF THE MATERIALS AND/OR DATA PROVIDED TO RECIPIENT UNDER THIS AGREEMENT.

15. Recipient's Responsibility for Handling Materials. Recipient and Recipient's PI acknowledge that Materials may carry viruses, latent viral genomes, and other infectious agents. Recipient and Recipient's PI agree to treat Materials as if they were not free of contamination, and affirm that Materials will be handled by trained persons under laboratory conditions that afford adequate biohazard containment. By accepting Materials, Recipient assumes full responsibility for their safe and appropriate handling.

16. Non-Endorsement, Indemnification. Recipient and Recipient's PI agree not to claim, infer, or imply United States Government endorsement of the Research Project, the entity, or personnel conducting the Research Project, or any resulting commercial product(s) except as described in section 7.

Recipient and Recipient's PI agree to release the United States Government, the NHLBI MDS STUDY, and all investigator(s) who generated Data and Materials, and the agents and employees of each of them from all liabilities, demands, damages, expenses, and losses arising out of Recipient's use for any purpose.

Except where prohibited by law, Recipient agrees to defend and indemnify the United States Government, the NHLBI MDS STUDY, and all investigator(s) who generated Data and Materials, and the agents and employees of each of them for all liabilities, demands, damages, expenses, and losses arising out of Recipient's use for any purpose.

17. Accuracy of Data. Recipient agrees that the United States Government and the NHLBI MDS STUDY are not responsible for the accuracy of Data or the provenance or integrity of Materials provided.

18. Recipient's Compliance with Recipient IRB's Requirements. Recipient certifies that the conditions for use of the Data and/or Materials in conjunction with the Research Project have been reviewed by the Recipient's Institutional Review Board (IRB) or similar human subjects oversight body in accordance with Department of Health and Human Services regulations at 45 CFR Part 46. Recipient agrees to comply fully with all such conditions and with the participants' informed consent documents, and any additional conditions that may be imposed by the NHLBI MDS STUDY IRB(s). Recipient agrees to report promptly to the NHLBI MDS STUDY and NHLBI any unanticipated problems or proposed changes in the Research Project. Recipient also agrees to report to Recipient's IRB any unanticipated problems or changes in the Research Project that involve additional risks to participants or others. Recipient remains subject to applicable state and local laws and regulations and institutional policies that provide additional protections for human subjects.

19. Recipient's Responsibility to follow Data Security Best Practices. Recipient is aware of computer and data security best practices and will follow them for receipt, storage and use of Data and Resultant Data. An example of best practice guidelines can be found in http://www.ncbi.nlm.nih.gov/projects/gap/pdf/dbgap_2b_security_procedures.pdf.

20. Amendments. Amendments to this DMDA must be made in writing and signed by authorized representatives of all parties.

21. Termination. This DMDA shall terminate at the earliest of: the completion of the Research Project; five (5) years after the effective date of this DMDA; abandonment of the Research Project; or violation by Recipient of any provisions of this DMDA not remedied within 30 days after the date of written notice by

NHLBI and NHLBI MDS STUDY of such violation.

22. Disqualification, Enforcement. Failure to comply with any of the terms of this DMDA may result in disqualification of Recipient from receiving additional Data and/or Materials. The United States Government and/or the NHLBI MDS STUDY may have the right to institute and prosecute appropriate proceedings at law or in equity against the Recipient for violating or threatening to violate the confidentiality requirements of this DMDA, the limitations on the use of the Data or Materials provided, or both. Proceedings may be initiated against the violating party, or legal representatives, and assigns, for a restraining injunction, compensatory and punitive damages, mandamus, and/or any other proceeding at law or in equity, including obtaining the proceeds from any intellectual property or other rights that are derived in whole or in part from the breach of the confidentiality requirements or use limitations of this agreement. In addition, Recipient and Recipient's PI acknowledge that a breach or threatened breach of the confidentiality requirements or use limitations of this DMDA may subject Recipient and Recipient's PI to legal action on the part of NHLBI MDS STUDY participants, their families, or both.

23. Representations. Recipient and Recipient's PI expressly certify that the contents of any statements made or reflected in this document are truthful and accurate.

24. Prior Distribution Agreements. By execution of this DMDA, Recipient certifies its good faith belief that it is in compliance with the terms and conditions of all its existing DMDAs with the NHLBI MDS STUDY and/or the NHLBI.

Required Signatures begin on the next page

RECIPIENT'S PRINCIPAL INVESTIGATOR AND RECIPIENT'S AUTHORIZED REPRESENTATIVE:

_____
Name and Title of Recipient's Principal Investigator

_____
Surface Mail Address of Recipient's Principal Investigator

_____
Email Address of Recipient's Principal Investigator

_____
Telephone Number of Recipient's Principal Investigator

_____
Read and Acknowledged by Signature of Recipient's Principal Investigator and Date

_____*a[non-profit ☐]OR [for-profit ☐] corporation/institution*
Name of Recipient (Corporation/Institution)

organized under the laws of (State/Country): _____

*with a principal address at:*_____

_____
Name and Title of Recipient's Authorized Representative

_____
Signature and Date of Recipient's Authorized Representative

DATA COORDINATING CENTER FOR NHLBI MDS STUDY

_____
Name and Title of NHLBI MDS STUDY Data Coordinating Center Authorized Representative

_____
Signature and Date of NHLBI MDS STUDY Data Coordinating Center Authorized Representative

NHLBI (for Materials only):

_____
Name and Title of NHLBI Authorized Representative

_____
Signature and Date of NHLBI Authorized Representative

This Distribution Agreement is entered into as of: _____ (effective date)