1. Requesting an Application Package

The application forms package specific to this opportunity must be accessed through ASSIST or an institutional system-to-system solution. A button to apply using ASSIST is available in Part 1 of this FOA. See your administrative office for instructions if you plan to use an institutional system-to-system solution.

2. Content and Form of Application Submission

It is critical that applicants follow the Multi-Project (M) Instructions in the SF424 (R&R) Application Guide (//grants.nih.gov/grants/guide/url_redirect.htm?id=12000), except where instructed in this funding opportunity announcement to do otherwise and where instructions in the Application Guide are directly related to the Grants.gov downloadable forms currently used with most NIH opportunities. Conformance to the requirements in the Application Guide is required and strictly enforced. Applications that are out of compliance with these instructions may be delayed or not accepted for review.

Letter of Intent

Although a letter of intent is not required, is not binding, and does not enter into the review of a subsequent application, the information that it contains allows IC staff to estimate the potential review workload and plan the review.

By the date listed in Part 1. Overview Information, prospective applicants are asked to submit a letter of intent that includes the following information:

- Descriptive title of proposed activity
- Name(s), address(es), and telephone number(s) of the PD(s)/PI(s)
- Names of other key personnel
- Participating institution(s)
- Number and title of this funding opportunity

The letter of intent should be sent to:

Ramesh Vemuri, Ph.D.
National Institute on Aging (NIA)
Telephone: 301-496-9666
Email: ramesh.vemuri@nih.gov (mailto:ramesh.vemuri@nih.gov)

Page Limitations

Available Component Types	Research Strategy/Program Plan Page Limits
Overall	6
Admin Core (use for Administrative Core)	6
Core	6
Project	12

Additional page limits described in the SF424 Application Guide and the Table of Page Limits (//grants.nih.gov/grants/guide/url_redirect.htm?id=11133) must be followed.

Instructions for the Submission of Multi-Component Applications

The following section supplements the instructions found in the SF424 (R&R) Application Guide, and should be used for preparing a multi-component application.

Revision applications must include an Overall component and the components that are affected by the revision. Therefore, the component requirements listed below may not apply to the revision application.

The application should consist of the following components:

- Overall: required, one
- Administrative Core: required, one (optional for a revision)
- Core: optional, no maximum
- Projects: a minimum of three required, no maximum

Overall Component

When preparing your application, use Component Type 'Overall'.

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions, as noted.

SF424 (R&R) Cover (Overall)

Complete entire form.

PHS 398 Cover Page Supplement (Overall)

Note: Human Embryonic Stem Cell lines from other components should be repeated in cell line table in Overall component.

Research & Related Other Project Information (Overall)

Follow standard instructions.

Project/Performance Site Location(s) (Overall)

Enter primary site only.

A summary of Project/Performance Sites in the Overall section of the assembled application image in eRA Commons compiled from data collected in the other components will be generated upon submission.

Research & Related Senior/Key Person Profile (Overall)

Include only the Project Director/Principal Investigator (PD/PI) and any multi-PDs/PIs (if applicable to this FOA) for the entire application.

A summary of Senior/Key Persons followed by their Biographical Sketches in the Overall section of the assembled application image in eRA Commons will be generated upon submission.

Budget (Overall)

The only budget information included in the Overall component is the Estimated Project Funding section of the SF424 (R&R) Cover.

A budget summary in the Overall section of the assembled application image in eRA Commons compiled from detailed budget data collected in the other components will be generated upon submission.

PHS 398 Research Plan (Overall)

Introduction to Application: For Resubmission and Revision applications, an Introduction to Application is required in the Overall component.

Specific Aims: Describe the aims of the program project and how each individual project and core contributes to these aims.

Revisions: Describe how the aims of the revision application expand the aims of the program project. What does the overall program gain from this revision?

Resubmissions or Renewals: If the structure of projects and cores has changed, identify the cores and projects consecutively (numbers for projects, letters for cores) according to how they are arranged in the current application. Show the correspondence to the prior structure.

Research Strategy:

Significance: *All applications:* Focusing on the program project or revision as a whole, address (i) the importance of the problem or critical barrier to the field that the proposed project/revision addresses, (ii) how the proposed project/revision will improve scientific knowledge, technical capability, and/or clinical practice in one or more broad fields, (iii) how the concepts, methods, technologies, treatments, services, or preventive interventions that drive this field will be changed if the proposed aims are achieved, and (iv) *(for Revisions)* how the outcomes of the program project will be enhanced by the proposed work on this revision.

Resubmissions or Renewals: Identify and justify any changes in research emphasis and funds requested. If the structure of projects and cores has changed, identify the cores and projects consecutively (numbers for projects and letters for cores) according to how they are arranged in the current application. Show the correspondence to the prior structure.

Innovation: Considering the program project as a whole, show how the proposed research seeks to shift current research or clinical practice paradigms through use of novel concepts, approaches, methodologies, instrumentation, or interventions. Are these concepts, approaches, methodologies, instrumentation, or interventions novel to the research field or novel in a broad sense? Does the proposed work refine, improve, or apply in a new way the concepts, approaches, methodologies, instrumentation, or interventions proposed?

Revisions or Renewals: Show how the proposed work enhances the innovation of the overall program project.

Approach:

All applications: Include the major approaches and studies involved in the application, showing how the approaches of cores and individual projects complement each other or are inter-dependent to allow the contribution of the whole program project to be greater than the total of the individual contributions of the cores and projects. Describe the mechanisms that will ensure the coherence of the project and maintain a multidisciplinary focus.

Resubmissions or Renewals: Describe progress from the prior period of support that is of particular significance to the program project as a whole. If the current submission omits individual projects or cores that were active in the prior funding period, describe their progress and explain why they are omitted. Identify and justify any substantive differences in approaches from the prior funding period.

Letters of Support: Provide letters of support that are relevant to the project as a whole. Note that any letters of support from advisory committee members should be submitted with the administrative core.

Resource Sharing Plan: Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&R) Application Guide.

Appendix:

Only limited items are allowed in the Appendix. Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide; any instructions provided here are in addition to the SF424 (R&R) Application Guide instructions.

PHS Human Subjects and Clinical Trials Information (Overall)

When involving human subjects research, clinical research, and/or NIH-defined clinical trials follow all instructions for the PHS Human Subjects and Clinical Trials Information form in the SF424 (R&R) Application Guide, with the following additional instructions:

If you answered "Yes" to the question "Are Human Subjects Involved?" on the R&R Other Project Information form, there must be at least one human subjects study record using the **Study Record: PHS Human Subjects and Clinical Trials Information** form or a **Delayed Onset Study** record within the

application. The study record(s) must be included in the component(s) where the work is being done, unless the same study spans multiple components. To avoid the creation of duplicate study records, a single study record with sufficient information for all involved components must be included in the Overall component when the same study spans multiple components.

Study Record: PHS Human Subjects and Clinical Trials Information

All instructions in the SF424 (R&R) Application Guide must be followed

Delayed Onset Study

Note: Delayed onset (https://grants.nih.gov/grants/glossary.htm#DelayedOnsetHumanSubjectStudy) does NOT apply to a study that can be described but will not start immediately (i.e., delayed start).

All instructions in the SF424 (R&R) Application Guide must be followed.

PHS Assignment Request Form (Overall)
All instructions in the SF424 (R&R) Application Guide must be followed.

Administrative Core
When preparing your application, use Component Type 'Admin Core.'

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions, as noted.

SF424 (R&R) Cover (Administrative Core)
Complete only the following fields:

- · Applicant Information
- · Type of Applicant (optional)
- · Descriptive Title of Applicant's Project
- · Proposed Project Start/Ending Dates

PHS 398 Cover Page Supplement (Administrative Core)
Enter Human Embryonic Stem Cells in each relevant component.

Research & Related Other Project Information (Administrative Core)
Human Subjects: Answer only the 'Are Human Subjects Involved?' and 'Is the Project Exempt from Federal regulations?' questions.

Vertebrate Animals: Answer only the 'Are Vertebrate Animals Used?' question.

Project Narrative: Do not complete. Note: ASSIST screens will show an asterisk for this attachment indicating it is required. However, eRA systems only enforce this requirement in the Overall component and applications will not receive an error if omitted in other components.

Project /Performance Site Location(s) (Administrative Core)
List all performance sites that apply to the specific component.

Note: The Project Performance Site form allows up to 300 sites, prior to using additional attachment for additional entries.

Research & Related Senior/Key Person Profile (Administrative Core)
- · In the Project Director/Principal Investigator section of the form, use Project Role of 'Other' with Category of 'Core Lead' and provide a valid eRA Commons ID in the Credential field.
- · In the additional Senior/Key Profiles section, list Senior/Key persons that are working in the component.

- ○ · Include a single Biographical Sketch for each Senior/Key person listed in the application regardless of the number of components in which they participate. When a Senior/Key person is listed in multiple components, the Biographical Sketch can be included in any one component.
- ○ · If more than 100 Senior/Key persons are included in a component, the Additional Senior Key Person attachments should be used.
- ○ · An Administrative core leader must also be an overall PD/PI.

Budget (Administrative Core)

Budget forms appropriate for the specific component will be included in the application package.

Note: The R&R Budget form included in many of the component types allows for up to 100 Senior/Key Persons in section A and 100 Equipment Items in section C prior to using attachments for additional entries. All other SF424 (R&R) instructions apply.

PHS 398 Research Plan (Administrative Core)

Introduction to Application: For Resubmission and Revision applications, an Introduction to Application is allowed for each component.

Specific Aims: The administrative core provides overall leadership to the program project, and the aims of the core should show the elements by which leadership and integration will be achieved, such as through common seminars and meetings, an external advisory board, and plans for joint dissemination of study results.

For Revisions: Specific Aims should show how the aims of the administrative core change to accommodate the revision.

Research Strategy:

Significance: Describe how the activities of the administrative core will implement the overall vision of the program project as an integrated investigation of a scientific field or problem in aging.

For Revisions: The application should show how the proposed changes to the administrative core are valuable in accommodating the expanded vision of the program project.

Approach: Describe how the elements proposed in the administrative core will be operationalized to achieve transparent communication across projects and cores, cross-project fertilization and collaboration, and common objectives for the program project as a whole. Elements should include, but not be limited to, means for internal quality control of research, management of day-to-day program activities, management of contractual agreements, resolution of disputes, and allocation of funds.

For Revisions: The application should describe any changes to the elements of the core and how they facilitate overall integration, management, or quality control. If proposing a new external advisory board, do not list proposed members in the application. Instead, list intended areas of expertise.

Letters of Support: If a renewal project previously had an external advisory board, then letters of support should be provided from members continuing in the next proposed period. Do not provide letters of support from new members. Do not contact or recruit new members until after the review process is completed.

Resource Sharing Plan: Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&R) Application Guide.

Appendix:

Only limited items are allowed in the Appendix.Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide; any instructions provided here are in addition to the SF424 (R&R) Application Guide instructions.

PHS Human Subjects and Clinical Trials Information (Administrative Core)

When involving human subjects research, clinical research, and/or NIH-defined clinical trials follow all instructions for the PHS Human Subjects and Clinical Trials Information form in the SF424 (R&R) Application Guide, with the following additional instructions:

If you answered "Yes" to the question "Are Human Subjects Involved?" on the R&R Other Project Information form, you must include at least one human subjects study record using the **Study Record: PHS Human Subjects and Clinical Trials Information** form or a **Delayed Onset Study** record.

Study Record: PHS Human Subjects and Clinical Trials Information

All instructions in the SF424 (R&R) Application Guide must be followed

Delayed Onset Study

Note: [Delayed onset (https://grants.nih.gov/grants/glossary.htm#DelayedOnsetHumanSubjectStudy)](https://grants.nih.gov/grants/glossary.htm#DelayedOnsetHumanSubjectStudy) does NOT apply to a study that can be described but will not start immediately (i.e., delayed start).All instructions in the SF424 (R&R) Application Guide must be followed.

Core

When preparing your application in ASSIST, use Component Type 'Core.' Label the cores alphabetically, along with the core title. The Administrative Core is Core A, the first optional core is Core B, and so on.

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions, as noted.

SF424 (R&R) Cover (Core)

Complete only the following fields:

- · Applicant Information
- · Type of Applicant (optional)
- · Descriptive Title of Applicant's Project
- · Proposed Core Start/Ending Dates

PHS 398 Cover Page Supplement (Core)

Enter Human Embryonic Stem Cells in each relevant component.

Research & Related Other Project Information (Core)

Human Subjects: Answer only the 'Are Human Subjects Involved?' and 'Is the Project Exempt from Federal regulations?' questions.

Vertebrate Animals: Answer only the 'Are Vertebrate Animals Used?' question.

Project Narrative: Do not complete. Note: ASSIST screens will show an asterisk for this attachment indicating it is required. However, eRA systems only enforce this requirement in the Overall component and applications will not receive an error if omitted in other components.

Project/Performance Site Location(s) (Core)

List all performance sites that apply to the specific component.

Note: The Project Performance Site form allows up to 300 sites prior to using additional attachment for additional entries.

Research & Related Senior/Key Person Profile (Core)

In the Project Director/Principal Investigator section of the form, use Project Role of 'Other' with Category of Core Lead and provide a valid eRA Commons ID in the Credential field.

In the additional Senior/Key Profiles section, list Senior/Key persons that are working in the component.

Include a single Biographical Sketch for each Senior/Key person listed in the application regardless of the number of components in which they participate. When a Senior/Key person is listed in multiple components, the Biographical Sketch can be included in any one component.

If more than 100 Senior/Key persons are included in a component, the Additional Senior Key Person attachments should be used.

Budget (Core)

Budget forms appropriate for the specific component will be included in the application package.

Note: The R&R Budget form included in many of the component types allows for up to 100 Senior/Key Persons in section A and 100 Equipment Items in section C prior to using attachments for additional entries. All other SF424 (R&R) instructions apply.

PHS 398 Research Plan (Core)

Introduction to Application: For Resubmission and Revision applications, an Introduction to Application is allowed for each component.

Specific Aims: Identify which projects the core will assist and the overall role of the core in the program project.

Research Strategy: Organize the Research Strategy into sections on a. Significance and b. Approach. Innovation will be considered in relation to Approach and Significance. It will not be reviewed as a separate criterion.

Letters of Support: Provide any letters of support that are specific to the relevant core.

Resource Sharing Plan: Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&R) Application Guide.

Appendix: Only limited items are allowed in the Appendix. Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide.

PHS Human Subjects and Clinical Trials Information (Core)

When involving NIH-defined human subjects research, clinical research, and/or clinical trials follow all instructions for the PHS Human Subjects and Clinical Trials Information form in the SF424 (R&R) Application Guide, with the following additional instructions:

If you answered "Yes" to the question "Are Human Subjects Involved?" on the R&R Other Project Information form, you must include at least one human subjects study record using the Study Record: PHS Human Subjects and Clinical Trials Information form or a delayed onset study record.

Study Record: PHS Human Subjects and Clinical Trials Information: All instructions in the SF424 (R&R) Application Guide must be followed.

Delayed Onset Study: All instructions in the SF424 (R&R) Application Guide must be followed.

Project

When preparing your application in ASSIST, use Component Type 'Project.'

All instructions in the SF424 (R&R) Application Guide must be followed, with the following additional instructions, as noted.

SF424 (R&R) Cover (Project)

Complete only the following fields:

- · Applicant Information
- · Type of Applicant (optional)
- · Descriptive Title of Applicant's Project
- · Proposed Project Start/Ending Dates

PHS 398 Cover Page Supplement (Project)

Enter Human Embryonic Stem Cells in each relevant component.

Research & Related Other Project Information (Project)

Human Subjects: Answer only the 'Are Human Subjects Involved?' and 'Is the Project Exempt from Federal regulations?' questions.

Vertebrate Animals: Answer only the 'Are Vertebrate Animals Used?' question.

Project Narrative: Do not complete. Note: ASSIST screens will show an asterisk for this attachment indicating it is required. However, eRA systems only enforce this requirement in the Overall component and applications will not receive an error if omitted in other components.

Project /Performance Site Location(s) (Project)

List all performance sites that apply to the specific component.

Note: The Project Performance Site form allows up to 300 sites, prior to using additional attachment for additional entries.

Research & Related Senior/Key Person Profile (Project)

In the Project Director/Principal Investigator section of the form, use Project Role of 'Other' with Category of Project Lead and provide a valid eRA Commons ID in the Credential field.

In the additional Senior/Key Profiles section, list Senior/Key persons that are working in the component.

Include a single Biographical Sketch for each Senior/Key person listed in the application regardless of the number of components in which they participate. When a Senior/Key person is listed in multiple components, the Biographical Sketch can be included in any one component.

If more than 100 Senior/Key persons are included in a component, the Additional Senior Key Person attachments should be used.

Budget (Project)

Budget forms appropriate for the specific component will be included in the application package.

Note: The R&R Budget form included in many of the component types allows for up to 100 Senior/Key Persons in section A and 100 Equipment Items in section C prior to using attachments for additional entries. All other SF424 (R&R) instructions apply.

PHS 398 Research Plan (Project)

Introduction to Application: For Resubmission and Revision applications, an Introduction to Application is allowed for each component.

Specific Aims: At least one aim of the project should reflect the overall theme of the program project.

Research Strategy: The Research Strategy should be organized into sections on Significance, Innovation, and Approach. The Significance section should include discussion of how this project relates to overall program goals.

Letters of Support: Provide any letters of support that are specific to this project. If a renewing project previously had an external advisory board then letters of support should be provided from members continuing in the next proposed period. Do not provide letters of support from proposed new members. Do not contact or recruit new members until after the review process is completed.

Resource Sharing Plan: Individuals are required to comply with the instructions for the Resource Sharing Plans as provided in the SF424 (R&R) Application Guide.

Appendix: Only limited items are allowed in the Appendix. Follow all instructions for the Appendix as described in the SF424 (R&R) Application Guide.

PHS Human Subjects and Clinical Trials Information (Project)

When involving NIH-defined human subjects research, clinical research, and/or clinical trials follow all instructions for the PHS Human Subjects and Clinical Trials Information form in the SF424 (R&R) Application Guide, with the following additional instructions:

If you answered "Yes" to the question "Are Human Subjects Involved?" on the R&R Other Project Information form, you must include at least one human subjects study record using the Study Record: PHS Human Subjects and Clinical Trials Information form or a delayed onset study record.

Study Record: PHS Human Subjects and Clinical Trials Information: All instructions in the SF424 (R&R) Application Guide must be followed.

Delayed Onset Study: All instructions in the SF424 (R&R) Application Guide must be followed.

3. Unique Entity Identifier and System for Award Management (SAM)

See Part 1. Section III.1 for information regarding the requirement for obtaining a unique entity identifier and for completing and maintaining active registrations in System for Award Management (SAM), NATO Commercial and Government Entity (NCAGE) Code (if applicable), eRA Commons, and Grants.gov.

4. Submission Dates and Times

Part I. Overview Information contains information about Key Dates and times. Applicants are encouraged to submit applications before the due date to ensure they have time to make any application corrections that might be necessary for successful submission. When a submission date falls on a weekend or Federal holiday (https://grants.nih.gov/grants/guide/url_redirect.htm?id=82380), the application deadline is automatically extended to the next business day.

Organizations must submit applications to Grants.gov (//grants.nih.gov/grants/guide/url_redirect.htm?id=11128) (the online portal to find and apply for grants across all Federal agencies) using ASSIST or other electronic submission systems. Applicants must then complete the submission process by tracking the status of the application in the eRA Commons (//grants.nih.gov/grants/guide/url_redirect.htm?id=11123), NIH's electronic system for grants administration. NIH and Grants.gov systems check the application against many of the application instructions upon submission. Errors must be corrected and a changed/corrected application must be submitted to Grants.gov on or before the application due date and time. If a Changed/Corrected application is submitted after the deadline, the application will be considered late. Applications that miss the due date and time are subjected to the NIH Policy on Late Application Submission.

Applicants are responsible for viewing their application before the due date in the eRA Commons to ensure accurate and successful submission.

Information on the submission process and a definition of on-time submission are provided in the SF424 (R&R) Application Guide.