



Category 4

Transformational Science Projects

Category 4 Instructions

Transformational Science Projects

Research Alignment

Does my proposed research belong in the Transformational Science Category? Yes, if the primary focus of your proposed research involves the following:

Transformational Science (TSCI)	The USWBSI is seeking <u>new research approaches to enrich its portfolio with novel concepts and new PIs</u> . If you have a concept for consideration, make sure to submit to this new Transformational Science category.
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To help accelerate the development of new germplasm and technologies, the Transformational Science (TSCI) category’s overall goals are to attract expertise of young scientists that are not part of the Initiative, recruit and explore new ideas and approaches, and develop integrated projects that leverage the strengths of the Initiative. The TSCI category spans all of the research areas of the Initiative.

Proposals should incorporate the following:

1. At least one of the PIs is a new scientist to the Initiative
2. The proposed work represents a novel approach to address FHB (currently funded projects can be viewed in the [USWBSI Project Database](#))

Proposals that include collaboration between scientists involved with two or more of the current research areas/coordinated projects are preferred.

Please note: PIs who have received TSCI funding in a prior funding cycle are not eligible to submit a pre-proposal for the same TSCI project again in the TSCI category, but are welcome to submit their project to one of the other USWBSI categories for consideration.

Category 4 Contact Information

Transformational Science Projects		
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Key Deadlines

Category 4 Transformational Science (TSCI)	Letter of Intent (LOI) online form submitted by PIs	June 28, 2023
	The NFO notifies all PIs who submit Letters of Intent to TSCI on status and next steps	July 31, 2023
	USWBSI Submission Portal Opens	August 3, 2023
	If accepted, deadline for PIs to submit FY24 Pre-Proposal(s) and supporting documents via Submission Portal	September 21, 2023
	Pre-Proposal Review and Funding Determinations	Oct-Dec 2023
	PIs Notified of Pre-Proposal Decision	January 2024

PI Steps for Category 4 Submission Process

STEP 1

Pre-Submission Letter of Intent (LOI) Requirements

If you plan to participate in the Transformation Science Category, you must submit a Letter of Intent form that includes the following:

- Proposed project title
- Name of PI and Co-PIs, along with titles and years of experience
- Identify the research area(s), if any (MGMT, FST, GDER, PBG, VDHR) with which your project aligns

- Synopsis that describes the following:
 - the problem being addressed
 - approaches for solving the problem and the rationale for using these approaches
 - unique aspects of this project that make it transformational
 - the outputs of the project and how those outputs will be used by researchers, extension educators, or stakeholders to accomplish the overall mission of the USWBSI
- Include a statement that demonstrates that the PI/Co-PI's are capable of carrying out the proposed research based on past research productivity and expertise in the relevant field(s) of research
- Projected total amount of budget request for Year 1 of project



LOI Deadline: Letter of Intent form must be submitted online by **June 28, 2023**.
LOI Link: [USWBSI Letter of Intent Forms](#)

Letters of Intent (LOI) Review & Notification

After Executive Committee review, the USWBSI Networking & Facilitation Office (NFO) will notify all PIs who submitted Letters of Intent whether their proposed research has been accepted to submit a pre-proposal.

NOTE: If the reviewers determine your project doesn't meet the transformational science expectations, but is still deemed of interest to the USWBSI, you may be invited to submit an individual project pre-proposal following the instructions for Category 3 (page 25).

STEP 2

Pre-Proposal Submission Requirements

All PIs must complete the online pre-proposal submission via the [USWBSI Submission Portal](#). PIs are encouraged to review the form once it is available to familiarize yourself with all the required components. PIs will also be able to start the submission process, save and return as needed until the deadline for submission is reached. Requirements for this online submission tool must include and adhere to the following:

Principal Investigator Contact Information

By logging into the USWBSI website, your name, email and institution will populate based on what is in your login account. You can edit if needed. PIs will need to add in their department, mailing address with zip+4 and work phone details.

Project Title of Proposed Research

The title of the project pre-proposal must be brief (**85-character maximum** including spaces and punctuation) yet represent the major thrust of the project. Because this title will be used to provide information to those who may not be familiar with the proposed project, highly technical words or phraseology should be avoided where possible. In addition, phrases such as "investigation of" or "research on" should not be used. Keep in mind titles should be broad in scope, allowing for changes in project objectives annually as needed if awarded.

Research Category

Select Category 4 Transformational Science (TSCI).

Project Grain Class

Indicate which grain class(es) your new project will focus on; you can choose up to 3 options.

Project Type

All pre-proposals in FY24 will be new and will be automatically marked as such in the form.

Project Duration

As noted on page 5, for FY24, all projects will be considered for 2-years only and will be automatically marked in the form as such. In FY26, 4-year terms will again be considered. Please note, the USWBSI has always awarded funding annually and will continue to do so. Annual performance reports and continuation award review/approval will be required for each year of the project.

PI and Co-Investigator Background Information – Upload Required

To assist peer reviewers in assessing the competence and experience of the proposed collaborators. The items listed below should **be included for the PI and Co-Investigators** who are expected to work on the project in a significant fashion (e.g. expectation of co-authorship on ensuing publications), whether or not funds are sought for this support. The PI will need to upload the following items for the PI and Co-Investigators:

- **Curriculum Vitae (CV) with Publication List.** The CV should be limited to two pages in length, excluding publications. A presentation of academic and research credentials, e.g., educational, employment and professional history, and honors and awards should be included. Unless pertinent to the project, do not include meetings, seminars, or personal data. A chronological list of all publications in refereed journals during the past five years, including those in press, should be included, non-refereed technical publications that have relevance to the proposed project may be included. The CV and Publication List should be uploaded as one PDF file. CV/Pubs for collaborators or sub-contractors are not required.
- **Current and Pending Support (CPS) Form.** Download the current CPS form from the FY24 RFP web page at https://scabusa.org/research_rfp-fy24/forms_templates. *The provided form is preferred, but other USDA versions of Current and Pending Support forms are accepted (i.e., NIFA/AFRI).* Current and Pending Support Forms listing other current public or private support to which key personnel identified in the Pre-Proposal have committed portions of their time are required, whether or not salary support for person(s) involved is included in the budget. Analogous information must be provided for any pending proposals that are being considered by, or that will be submitted in the near future to, other possible sponsors, including other USDA Programs or agencies, and the USWBSI. Concurrent submission of identical or similar proposals to the other possible sponsors will not prejudice the review or evaluation by the USWBSI for this purpose. However, a Pre-Proposal that duplicates or overlaps substantially with a proposal already reviewed and funded (or to be funded) by another organization or agency will not be recommended under this program.

Project Pre-Proposal Materials – Upload Required

The following materials should be developed and uploaded as one PDF file in the order noted and adhering to the requirements as specified. Begin by downloading the Project Pre-Proposal Form from https://scabusa.org/research_rfp-fy24/forms_templates.

Project Summary

Fill in the Project Summary Page (limited to 2 pages), using Calibri or Times New Roman 12-point font, and include the following:

- Project Title (same as what is included in the submission form)
- Project PI, Institution and Co-PI(s), Institution(s)
- Project Summary

The text for this portion of the project summary **should not exceed 400 words** and should focus on the following (**all four bullets below must be addressed**):

- Overall project goal(s)
- Project Objectives (list in numbered format) and Expected Outcome(s) for each objective
- Approaches that will be used to accomplish project goal(s) within the period of proposed work
- Statement of Mutual Interest (i.e. how will stakeholders/end-users benefit from this research)

Project Description

The Project Description should immediately follow the Project Summary. The Project Description should provide a clear statement of the work to be undertaken and must include research objectives for the period of the proposed work and expected significance; relation to longer-term goals of the PI's project; and relation to the present state of knowledge in the field, to work in progress by the PI under other support and to work in progress elsewhere.

The Project Description should be formatted using Calibri or Times New Roman 12-point black colored font with one-inch margins. Bold formatting should only be used for section headings or used minimally to emphasize importance or significance.

Brevity will assist reviewers and USWBSI/NFO staff in dealing effectively with pre-proposals. The written text of the Project Description must be five pages or less (single spaced or equivalent); ten pages or less in total including figures and tables and should describe in clear, concrete terms the substance of your proposed research including the following:

Included within the 5-Page Text Limit (up to 10 pages with figures and tables)

- ***Title.*** Same as what is included in the submission form and Project Summary
- ***USWBSI Action Plan Alignment.*** Relevance of the project to the goals of the U.S. Wheat and Barley Scab Initiative with specific reference to the applicable priorities listed in the Action Plan clearly stated. The Action Plan can be viewed at https://scabusa.org/pdfs/uswbsi_action-plan_web.pdf.
- ***Introduction.*** A clear statement of the goal(s) and supporting objectives or research questions of the proposed project should be included. The most significant published work in the field under consideration, including the work of key project personnel on the current application, should be reviewed. The current status of research in this field of science should also be described including, but not limited to, any ongoing USWBSI-recommended work currently underway. Preliminary data pertinent to the proposed research may be included in this section. Present and discuss published literature that is directly related to, and supports, the proposed research.
- ***Rationale and Significance.*** It is understood that FHB is a devastating disease. Acknowledgment of this fact should require no more than one sentence. Concisely present the rationale behind the proposed research; identify the gaps in the knowledge base that your proposed research is trying to fill. If applicable, please indicate if the research proposed here could lead to successful acquisition of grant funds from other agencies.
- ***Research Materials and Methods.*** Specifically, this section must include:
 - The hypotheses or questions being asked
 - A description of the investigations and/or experiments proposed in the sequence in which the investigation or experiments are to be performed
 - Techniques, methodologies and procedures to be used in carrying out the proposed project, including the feasibility of the techniques. (Describe in step-by-step fashion exactly what techniques, materials and methods will be used and plans for preservation, documentation, and sharing of data, samples, physical collections, curriculum materials and other related research and education products.)
 - Results expected
 - Means by which experimental data will be analyzed or interpreted
 - Means of applying results or accomplishing technology transfer, where appropriate
 - Pitfalls that may be encountered
 - Limitations to proposed procedures
 - A detailed (but tentative) schedule/timeline for conducting major steps involved in these investigations and/or experiments for Year 1 (in alignment with Year 1 Budget)

NOTE: Failure to address each of the issues in the bullet list will diminish the likelihood of the success of your pre-proposal being recommended for funding.

NOT Included within the 5-Page Text Limit – Supplemental Information for the Project Description

Additionally, the following items can be included to support the project description (these items will not be counted toward the ten (10) page maximum).

- ***References to Project Description.*** Reference information is required of references cited in the Project Description. PIs must follow accepted scholarly practices in providing citations for source materials. While there is no established page limitation for the references, this section must include bibliographic citations only, and must not be used to provide parenthetical information outside of the project description.
- ***Facilities and Equipment.*** All facilities and major items of equipment available for use or assignment to the proposed project during the requested period of support should be described. In addition, items of nonexpendable equipment necessary to conduct and successfully conclude the proposed project should be listed (including dollar amounts), and if funds are requested for acquisition, justification should be included in the Budget Justification Worksheet and bid documentation should be noted and included in the project description.
- ***Collaborative or Sub-contractual Arrangements.*** If the nature of the proposed project requires collaboration or contractual arrangements with other research scientists, corporations, organizations, agencies, etc., the applicant must identify the collaborator(s) and provide a detailed explanation of the nature of the collaboration. Evidence in the form of a letter of intent (may be in the form of an e-mail) from all collaborators must be provided to assure reviewers that collaborators or sub-contractors involved have agreed to render the indicated services. The letter of intent must include specific details describing the services the collaborator will provide.

Budget Materials

PIs will need to provide the following detailed budget documentation. An Excel template with built-in formulas, space for your justification narrative, and auto-generation of the Budget Summary page is available. Make sure to double check that all of your details transferred as intended and all totals match.

Budget Type

Select type that matches the budget template you uploaded - Single Budget if award would be going to only one individual (i.e. PI) or Multi-PI Budget if project involves multiple PIs at different institutions (award from USDA-ARS would ultimately be set up with separate agreements/awards).

Budget Request

You will need to enter the final budget requested dollar amount from your Excel template for your project into the form.



Budget Justification Worksheet & Budget Summary – Upload Required

Utilizing one of the **Excel 'Budget Justification Worksheet & Budget Summary' Templates** (available at https://scabusa.org/research_rfp-fy24/forms_templates), complete all the relevant sections and follow the instructions included in the file. Once finalized, upload the Excel Template into your submission.

NOTE: Narrative budget justification for all line-items where funds are requested is required. The narrative descriptive details must be provided within the budget template to justify the request.

Make sure to select the appropriate template for your situation, template options include:

- **Budget Justification Worksheet & Budget Summary Template – Single PI version;** single PI/single project
- **Budget Justification Worksheet & Budget Summary Template – Multi-PI version;** use for a pre-proposal with multiple PIs on a single project that will be awarded out to multiple PI institutions. The Multi-PI version allows two (2) different PIs to each have a separate budget justification worksheet that

will transfer automatically into a single cumulative Budget Summary page. In such cases, if a Multi-PI proposed research project is recommended for funding, the awards will go directly to the individuals' institutions from USDA-ARS. If your pre-proposal has more than two (2) PIs, contact the USWBSI-NFO and a version can be provided to accommodate the number of Co-PIs involved.

When preparing your budget keep these items in mind:

- ***Tuition Remission:*** Tuition remission is **permitted** under USDA-ARS **research grant agreements** with any type of recipient organization (i.e. universities). However, for PIs currently funded under a Non-Assistance Cooperative Agreement (NACA), tuition remission is NOT allowed.
- ***Equipment:*** If you are including equipment in your budget, additional bid documentation needs to be included in your project description file. Equipment requests are intended for an article of tangible, nonexpendable, property having a useful life of more than one year and an acquisition cost of \$5,000 or more per unit per the federal definition. You should also include a justification for this equipment in the Budget Justification form.
- ***Indirect Cost (IDC) Limitation Policy:*** Because Fusarium head blight is such a severe problem for the U.S. wheat and barley industries, the USWBSI's review process focuses on the **competitiveness of total project costs** to maximize total funding used for research. As part of the 2018 Farm Bill - Agriculture Improvement Act of 2018 – signed into law (Public Law 115-334) on 12/20/18, a fixed Indirect Cost Limitation of 10% has been set for the USWBSI ([See Title VII, Subtitle C, Section 7303](#), page 332 of bill; page 336 of PDF). This is a limitation on the reimbursement of indirect costs and represents the maximum amount of grant dollars available to recover indirect costs. PIs must calculate the allowable IDC % per their institutions NICRA/F&A rate agreement to determine which calculation generates the lowest IDC amount for reimbursement, in accordance with the 10% limitation of Total Federal Funds Awarded. Universities may voluntarily elect to use a percentage below 10% for pre-proposals submitted to the USWBSI, however they **cannot charge a rate higher than 10%**. A formula is included in the template to determine the 10% limitation amount, or if lower amount that can be entered and will automatically carry forward. **NOTE:** Indirect Costs are not applicable to ARS Scientists and PIs currently funded under Non-Assistance Cooperative Agreements (NACAs).
- ***Small Business Innovated Research (SBIR) Fee:*** In the event your proposed research is recommended for funding, the SBIR Fee will be assessed prior to the award being made by USDA-ARS. The SBIR fee is mandated by Congress under [Public Law 112-81, Subtitle A, SEC. 5102 \(a\) \(1\) \(I\)](#) in support of the Small Business Act. The current rate for the SBIR fee is 3.65%. This fee is charged only to projects that are funded through a research grant agreement or a NACA with USDA-ARS (i.e. not applicable to ARS PIs). When applicable, PIs need to incorporate the SBIR fee into their budget request. The formula to calculate the fee is included in the template.

STEP 3

Pre-Proposal Submission



The [USWBSI Submission Portal](#) must be used for the submission of all FY24 pre-proposals. PIs will be able to start the submission process, save and return as needed until the deadline for submission is reached. If this is your first time submitting a pre-proposal with the USWBSI, you will be prompted to create an account to gain access and login to the submission form. **The Submission Portal opens August 3, 2023.**

PI Required Items Checklist for Category 4 Submission Process

STEP 1

- Submit Letter of Intent via online form


STEP 2

- If approved, prepare materials for submission per instructions and initiate Pre-Proposal Submission via the [USWBSI Submission Portal](#)
 - Enter key details in Submission Form
 - PI Contact Information
 - Project Title (keep broad in scope, 85 character maximum)
 - Research Category
 - Project Grain Class
 - Project Type (will automatically be selected as new)
 - Project Duration (will automatically be selected as a 2-year project)
 - Enter and upload PI and Co-Investigator Information (collect from your Co-PIs)
 - CV(s)/Publication List(s)
 - Current & Pending Support Forms
 - Enter Required Submission Uploads (use the [templates and forms](#) provided for required uploads)
 - Project Summary and Description (upload as one PDF meeting requirements noted)
 - Project Summary (should not exceed 400 words)
 - Project Description (should not exceed five pages of text, 10 pages including tables and figures)
 - Supplemental Project Description Items (if required, not included in page limit)
 - References to Project Description
 - Facilities and Equipment
 - Collaborative or Sub-contractual Agreements
 - Letters from Collaborators
 - Budget Materials
 - Budget Type
 - Budget Request
 - Budget Justification Worksheet & Budget Summary Template(s) (prepare in Excel template and upload; justification narrative details required for all sections and subsections where funds are being requested; e-signature required on the Budget Summary page)
- NOTE:** Make sure to use appropriate template either Individual or Multi-PI

STEP 3

- Finalize and submit Pre-Proposal via the online Submission Portal

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Letter of Intent Submission Link: [USWBSI Letter of Intent Forms](#)

Pre-Proposal Submission Link: [Access the USWBSI Submission Portal](#)

Forms & Templates for Upload: [All USWBSI FY24 RFP Forms & Templates to Prepare & Upload](#)