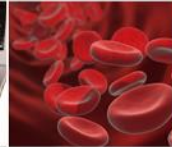




WHERE DISCOVERIES BEGIN



# Historically Black Colleges and Universities Undergraduate Program (HBCU-UP)

## Targeted Infusion Projects (TIP) Proposal Preparation Guidance Webinar 2022

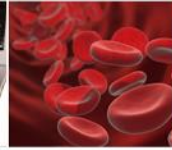
### Program Directors:

Carleitta Paige-Anderson, LeRoy Jones II, Jeremy Guinn,  
Tori Rhoulac Smith, and Alfred Hall

**Letters of Intent due September 13, 2022**  
**Proposals are due November 10, 2022**

**Division of Human Resource Development**  
**Directorate for Education and Human Resources**  
**National Science Foundation**

[Solicitation: Historically Black Colleges and Universities Undergraduate Program \(HBCU-UP\) \(nsf20559\) | NSF - National Science Foundation Proposal & Award Policies & Procedures Guide - PAPPG | NSF - National Science Foundation](#)



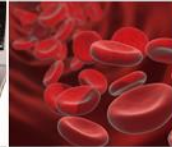
## Zoom Etiquette

### For a smooth experience, participants should:

- Update name to include institution
  - Example: LeRoy Jones II, School-Name
- Mute audio when not speaking
- Communicate via Chat during presentation
  - Select Everyone: general questions/comments
  - Select NSF staff member: private/personal situations
- Use “raise hand” function to engage during open discussion, unmute when called upon

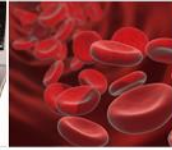


WHERE DISCOVERIES BEGIN



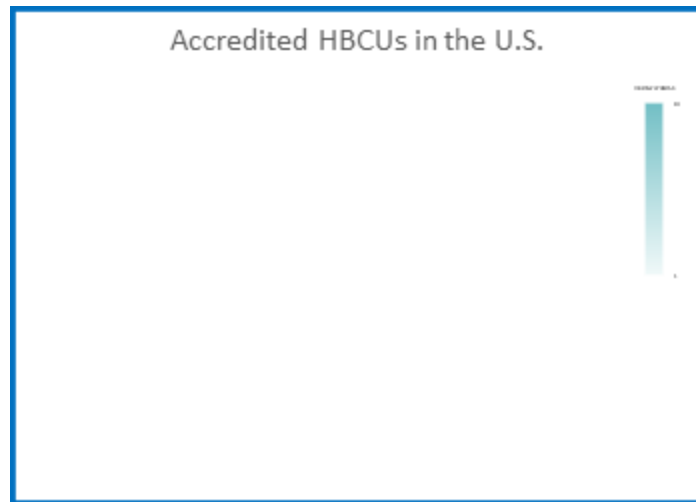
# Webinar Agenda

- Historically Black Colleges and Universities Undergraduate Program Overview
- Targeted Infusion Project
  - Eligibility
  - Overview
- Proposal Preparation and Submission Guidelines
- Merit Review Process
- For Your Consideration
- Discussion: Questions and Answers



# Historically Black Colleges and Universities- Undergraduate Program (HBCU-UP)

- Goal: To enhance the quality of undergraduate STEM education and research at HBCUs in order to broaden participation in the nation's STEM workforce and STEM graduate programs.

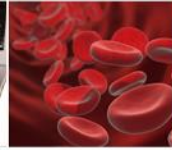




# HBCU-UP

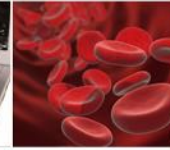
Supports development, implementation, and the study of evidence-based, innovative models and approaches to prepare HBCU undergraduates for STEM workforce.

- ✓ **Innovation in instruction and curriculum development**
- ✓ **STEM research experiences for undergraduates**
- ✓ Critical transitions (K-12 to undergraduate, 2-year to 4-year, retention from freshman to sophomore, undergraduate to graduate)
- ✓ STEM faculty professional and leadership development
- ✓ Enhance STEM faculty research
- ✓ Research capacity building
- ✓ Broadening participation research in STEM Education
- ✓ STEM teacher preparation



# HBCU-UP Funding Tracks (NSF 20-559)

- Broadening Participation Research in STEM
- Research Initiation Awards
- HBCU-Excellence in Research\*
  - HBCU-EiR is described under NSF solicitation [20-542](#)
  - Managed by the Office of Integrative Activities
- Targeted Infusion Projects
- Implementation Projects
  - Achieving Competitive Excellence (ACE)
- Broadening Participation Research Centers



# How do you seek to advance STEM Education and Research?

## Faculty Research

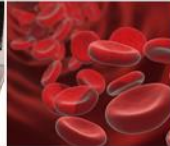
- Broadening Participation Research in STEM Education
- Research Initiation Awards
- HBCU-Excellence in Research\*

## Institutional Change

- Targeted Infusion Projects
- Implementation Projects
- Achieving Competitive Excellence Projects

## National Impact

- Broadening Participation Research Centers



# If You Aim to Enhance the Quality of STEM Undergraduate Education ...

## Targeted Infusion Projects

- Number of Awards: Up to 22
- Project Length: Up to three years
- Award Size: Up to \$400,000
- *Provide support to meet short term, focused goals to improve STEM undergraduate education at the HBCU*

## Implementation Awards

- Number of Awards: Up to 6
- Project Length: Up to 5 years
- Award Size: Up to \$1.25 million for 1st round implementation projects; up to \$2.25 million for 2nd and 3rd round implementation projects
- *Provide support to design, implement, study and assess comprehensive institutional efforts to increase the numbers of students and the quality of their preparation by strengthening STEM education and research*

## Achieving Competitive Excellence

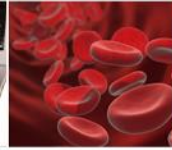
- Number of Awards: 1
- Project Length: Up to five years
- Award size: Up to \$3 million
- *Provide support to HBCUs with previous IMP projects to bolster their capacity and move onto the national landscape in undergraduate STEM education and research*





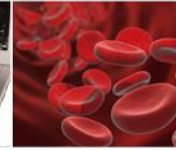
# Targeted Infusion Projects (TIP)

- Projects targeted to meet a short-term, well-defined goal to improve the quality of, and make innovations in, undergraduate STEM education.
- Number of awards: up to 22 in FY 2023
- Project Length: Two to three years
- Award size: Up to \$400,000
- Restrictions: Equipment cost cannot exceed 30% of the total NSF budget requested.
- The Principal Investigator for these projects should be the individual who will direct the implementation of the TIP project activities.



# Targeted Infusion Projects (TIP)

- Eligibility: Historically Black Colleges and Universities (HBCUs) that are accredited and offer undergraduate educational degree programs in science, technology, engineering and mathematics (STEM).
- An eligible institution can submit no more than **two** Targeted Infusion Project proposals per year and can only have **one** active Targeted Infusion Project for any given department or unit.
- Project activities must be focused in order to meet a very well-defined, short-term goal to build the quality of undergraduate education.
- Typically, projects are focused on one activity within a single STEM department. However, interdisciplinary and cross-disciplinary projects are also encouraged.



# Targeted Infusion Projects (TIP)

- Targeted Infusion Projects could create or adapt innovative learning experiences and pedagogies in STEM fields.
- Projects could develop creative uses of cyberlearning, specifically learning with cyberinfrastructure tools.
- Projects could enhance academic infrastructure by updating curriculum, modernizing laboratory research equipment, or improving the computational network array for research and education.



# Targeted Infusion Projects (TIP)

- Projects could enhance existing degree programs, establish new degree programs or concentrations, secure specialized accreditation or certification, or infuse STEM programs with disciplinary field advances and evolving workforce requirements.
- Projects could build explicit collaborations between STEM disciplines and teacher education programs.
- Projects that develop faculty expertise, promote implementation of educational innovations, or link to the preparation of future K-12 teachers are encouraged.
- **Project development must be guided by research on teaching and learning.**

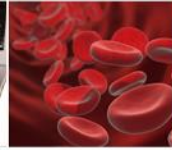


WHERE DISCOVERIES BEGIN



13

# PROPOSAL PREPARATION INSTRUCTIONS



# Two Important Documents

The HBCU-UP program solicitation, NSF 20-559, is available at: [Historically Black Colleges and Universities Undergraduate Program \(HBCU-UP\) | NSF - National Science Foundation](#)

The Proposal and Award Policies and Procedures Guide (PAPPG 22-1) is available at: [PAPPG Introduction \(nsf.gov\)](#)

This guide gives you step by step instructions on proposal preparation in Chapter II.



# Research.gov (or grants.gov)

## Proposal Preparation and Submission

- About Proposal Preparation and Submission
- Proposal Submission Capabilities
- Letter of Intent FAQs
- Proposal FAQs** ▾
  - General
  - Preliminary Proposals
  - Collaborative Proposals
  - Uploading Documents
  - Proposal Sections
  - Proposal Submission
  - Proposal Withdrawal
- Proposal Statuses** ▾
  - In Progress Statuses
  - Submitted Statuses
  - PFU/BR Statuses
- Demo Site FAQs** ▾

### About Proposal Preparation and Submission

The Research.gov Proposal Submission System modernizes proposal preparation and submission capabilities by improving the user experience while also reducing administrative burden through an intuitive interface and expanded automated proposal compliance checking. NSF is transitioning all preparation and submission functionality for **new** proposals from FastLane to Research.gov when the *Proposal & Award Policies & Procedures Guide* (PAPPG) (NSF 23-1) goes into effect in January 2023. Research.gov proposal preparation and submission capabilities have been developed incrementally, and Research.gov is very near the point where it can support all of FastLane's proposal preparation and submission tasks. Please see [NSF Important Notice 147: Research.gov Implementation Update](#) issued September 22, 2020, for additional information. Grants.gov continues to be an option for the preparation and submission of most types of NSF proposals.

Access the [Research.gov Proposal Submission System](#)

Explore the [Research.gov Proposal Preparation Demo Site](#)

#### Why Prepare Proposals in Research.gov?

- Fast and easy Proposal Setup Wizard
- Quickly find funding opportunities, initiate a proposal, and give access to administrative staff
- Expanded compliance checking ([View Research.gov compliance checks](#))
- Immediate compliance feedback upon proposal section upload
- PDF uploads are not altered
- Minimizes the Return without Review of proposals due to some formatting issues
- On-screen references to relevant sections of the PAPPG
- Better management of personnel and subawards
- Improved performance and less system downtime

Help NSF Build and Refine the New System

#### When to Use Research.gov

You may prepare your proposal in Research.gov if:

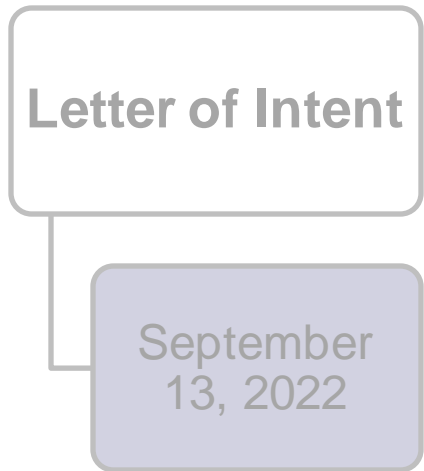
- 1 You are preparing a proposal in response to a Program Description
- 2 Your Program Solicitation specifies submission via Research.gov is available or required or your Program Solicitation requires a Letter of Intent or Preliminary Proposal
- 3 Your proposal is a **full proposal, renewal, or accomplishment-based renewal, OR**
- 4 Your proposal is one of the following types:
  - Research
  - Planning (Research.gov submission required)
  - RAPID
  - EAGER
  - RAISE
  - COAL

<https://www.research.gov/research-web/content/aboutpsm>

Would your university like to host a demonstration session? Contact [rgovbusinessoffice@nsf.gov](mailto:rgovbusinessoffice@nsf.gov). Be sure to indicate the number of people expected to attend.



# TIP Important Proposal Submission Details



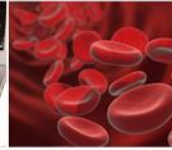
- ALL full proposals should be submitted via **research.gov (Do not use Fastlane)**
- LOIs are required for TIP full proposal submissions.
  - If LOI submitted via research.gov, associate LOI ID with the full proposal (insert in box).
  - If LOI submitted via Fastlane
    - Do NOT associate the LOI number in research.gov (leave this blank)
    - The first sentence of the project summary *must* identify the LOI ID (from Fastlane). “The LOI [insert LOI ID number] was submitted in Fastlane.”

**Related Letter of Intent**

Refer to funding opportunity [NSF 20-559](#) to determine letter of intent requirements. If needed, enter a letter of intent ID number that uses the same solicitation as this proposal.

Letter of Intent ID Number (e.g., L7654321)



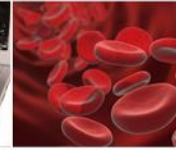


# NSF Proposal Content

- Cover Sheet and Certifications
- Project Summary
  - Both intellectual merit and broader impacts described
- Table of Contents (Automatic)
- Project Description
- References Cited
- Biographical Sketches (new format)
- Budgets and Budget Justification
- Current and Pending Support (new format)
- Facilities, Equipment and Other resources

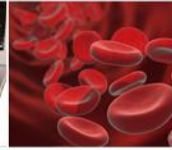


WHERE DISCOVERIES BEGIN



# NSF Proposal Content

- Collaborators and other Affiliations as a single copy document
- Special Information/Supplementary Documents
  - Mentoring Plans
    - Undergraduate student, Graduate student and/or Post-Doctoral research (if applicable)
  - Data Management Plan
  - Letters of Support
  - Quotes for Equipment



# Proposal Preparation Instructions

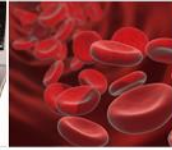
## Cover Sheet

Please begin the project title with “**Targeted Infusion Project: Followed by the title**”

Be sure to check all boxes that apply. Each box refers you to a section in the PAPPG, if you have questions.

## Project Summary

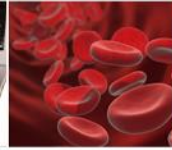
Each proposal must contain a summary of the proposed project not more than one page in length. The Project Summary consists of an **overview**, a statement on the **intellectual merit** of the proposed activity, and a statement on the **broader impacts** of the proposed activity.



# Proposal Preparation Instructions

## Project Description

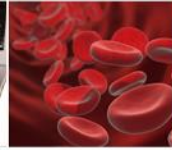
- 15-page limit
- The Project Description for NSF proposals must contain, as a separate section within the narrative, a discussion of the **intellectual merit and broader impacts** of the proposed activities. This should **not** be merely a repeat of the statements from the project summary, but an expansion of these statements.
- In addition, where applicable, Intellectual Merit and Broader Impact activities **must** be described in two separate sections in the summary of **Results from Prior NSF Support**.



# Proposal Preparation Instructions

## Project Description

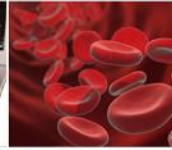
- Projects must describe and make a strong case for how a project advances the knowledge base in STEM education through research, evaluation or a combination of research and evaluation processes.
- The theoretical and empirical justification for the proposed project must be clearly articulated.
- Describe the overall goal(s) and objectives of the project. The objectives must be clearly stated, measurable, and achievable within the proposed timeline.
- Describe the benefits of achieving the goal(s) to STEM education and research at the institution.



# Proposal Preparation Instructions

## Project Description

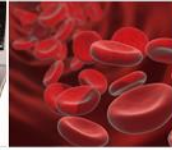
- Baseline data should be included in order to provide context for the impact of the Targeted Infusion Project.
- Describe the evidence-based strategies and activities that will be undertaken in order to achieve the goal(s). The strategies and activities must clearly be related to achieving the goal(s). This is the core of the project description.
- Since institutions have different policies and procedures, such as for new degree program approval, explain how the project timelines reflect all institutional requirements.



# Proposal Preparation Instructions

## Project Description

- Equipment and supplies – Please explain:
  - how recurring costs, such as lab supplies for a newly created laboratory course, will be supported after the project ends.
  - how long-term maintenance of new equipment will be supported after the project ends.
- Provide a management plan for the project that will ensure that the activities, the evaluation, and the required reporting will be implemented on time and within budget.
- Provide a timeline for the activities to be implemented - include measurable objectives and outcomes and the staff that are responsible for doing the activities.

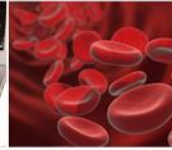


# Proposal Preparation Instructions

## Project Description

- It is expected that each Targeted Infusion proposal will include a formative and summative evaluation plan. The evaluation plan must be linked to the goals and objectives.
- An evaluator external to the project **is required**. The evaluator's credentials must be included.
- Include a plan that details how the knowledge gained from this project will be disseminated.
- Address institutional support for, and sustainability of, the project.

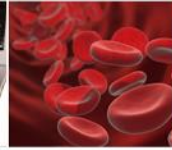




# Proposal Preparation Instructions

## Additional Proposal Preparation Instructions

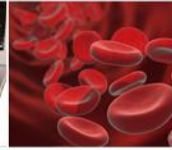
- Include references cited in the proposal. Follow PAPPG guidelines. Be sure your references reflect the most current state of the research in your field, and you are citing them properly in the proposal.
- Include [biographical sketches](#) in NSF format, follow PAPPG guidelines.
- Include [current and pending support](#), as well as *facilities, equipment and other resources* pages and use NSF format.
  - Enter this proposal as pending support.



# Proposal Preparation Instructions

## Budget and Budget Justification

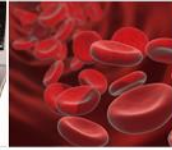
- Targeted Infusion Projects should budget for the PI with the most day-to-day contact with the project to attend a 2-day grantee meeting in the Washington, DC area each year of the project.
- Use the PAPPG ([NSF 22-1](#)) and section B of the solicitation as a guide in preparing the budget.
- Include a clear and detailed budget justification with your budget. The budget justification must correspond to the budget line items. All costs must be fully explained.
- Use the federally negotiated indirect cost rate in your budget.
- Write out clearly in your budget justification that you used the federally negotiated indirect cost rate of **xx%** and describe to which budget items this rate applies.



# Proposal Preparation Instructions

## Facilities, Equipment & Other Resources

- Provide a description of available facilities and priorities for their use, if applicable. Please note that this section is a required part of the proposal.
- This is the section where you may describe institutional support provided to your project. Such as, for example, the fact that the university will provide maintenance and utilities for a laboratory.
- Do not provide any \$ amounts – voluntary committed cost sharing is not allowed.

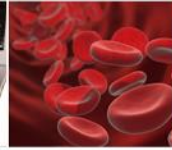


# Proposal Preparation Instructions

## Supplementary Documentation

- In the special information/supplementary documentation section of the proposal, include the following information only:
- Letters of support
- Quotes for equipment
- Data management plan
- Postdoctoral researcher mentoring and/or undergraduate or graduate student mentoring plans
- The evaluator's credentials.

**NOTE: The supplementary documentation section of the proposal may not be used to continue the project description.**



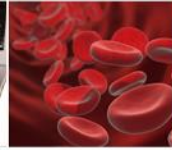
# Proposal Preparation Instructions

## Supplementary Documentation

- **Data Management Plan:** All proposals must describe plans for data management and sharing of the products of research or assert the absence of the need for such plans. The data management plan will be reviewed as part of the intellectual merit or broader impacts of the proposal, or both, as appropriate. Information can be found at: <https://www.nsf.gov/bfa/dias/policy/dmpdocs/ehr.pdf>  
Other Resource: <https://dmptool.org>
- **Postdoctoral Researcher and/or Undergraduate/Graduate Student Mentoring Plan:** Each proposal that requests funding to support postdoctoral researchers, undergraduate or graduate students must include, as supplementary documents, a description of the mentoring activities that will be provided for such individuals.

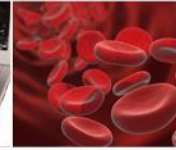


WHERE DISCOVERIES BEGIN



30

# HBCU-UP MERIT REVIEW PROCESS



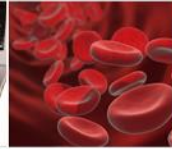
# Proposal Preparation Instructions

## NSF Merit Review Criteria:

Both criteria, **Intellectual Merit** and **Broader Impact**, will be given full consideration during the merit review and decision-making process. Each criterion is necessary but neither, by itself, is sufficient. Proposers must fully address both criteria.

**The following elements will be considered in the proposal's review:**

- What is the potential for the proposed activity to:
  - advance knowledge and understanding within its own field or across different fields (**Intellectual Merit**); and
  - benefit society or advance desired societal outcomes (**Broader Impacts**)?



# Proposal Preparation Instructions

## NSF Merit Review Criteria

- To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
- Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
- How well qualified is the individual, team, or institution to conduct the proposed activities?
- Are there adequate resources available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?

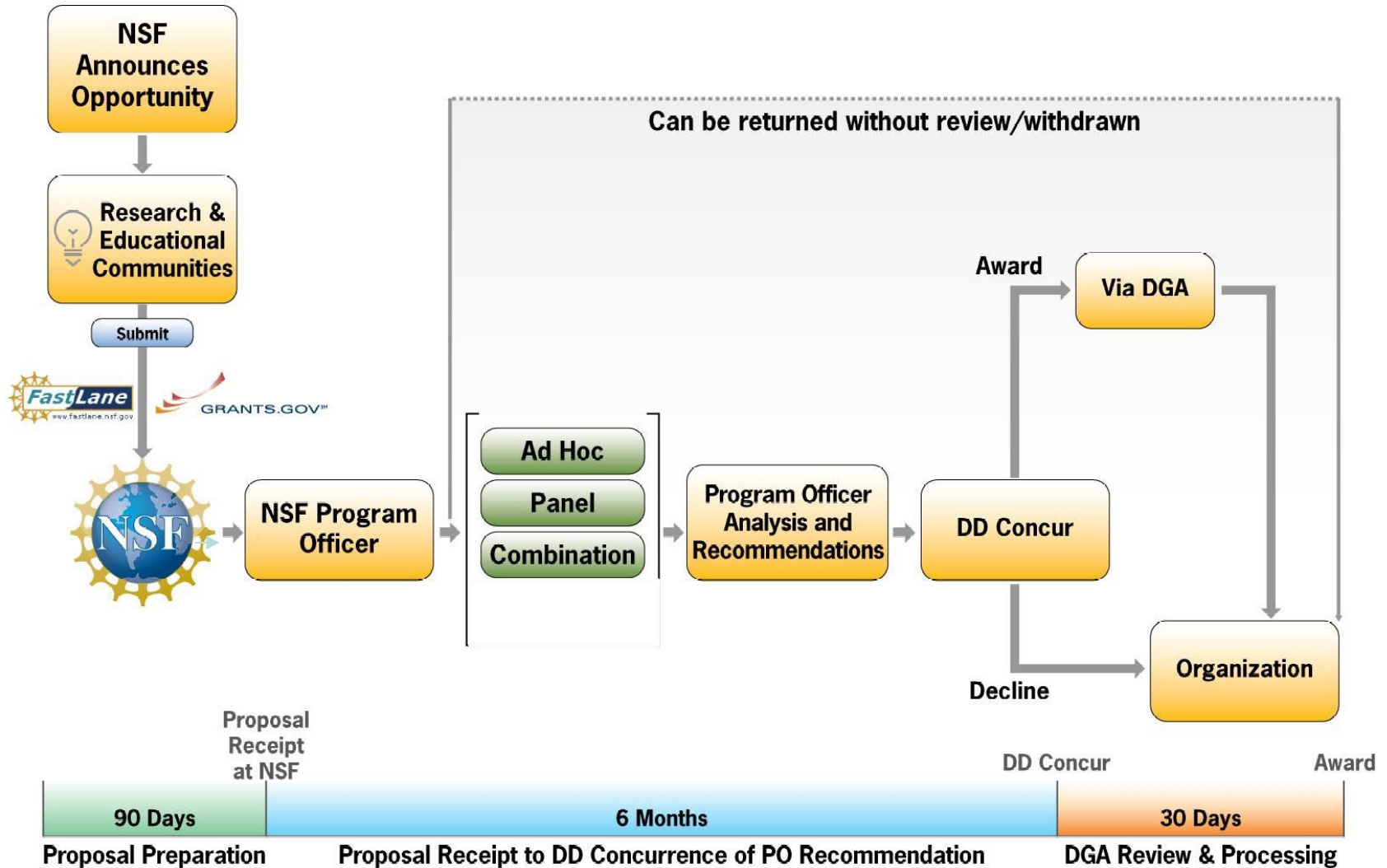




WHERE DISCOVERIES BEGIN

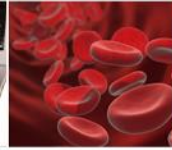


# Proposal Processing: Average duration

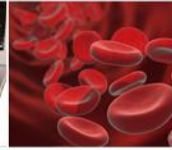




WHERE DISCOVERIES BEGIN

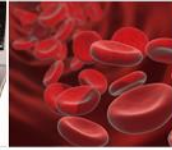


# For Your Consideration



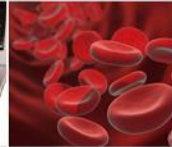
# Common Concerns Leading to Declined Proposals

- Lack of organization of the proposal
- Lack of clarity or detail in the narrative
- Lack of adequate justification for the proposed project
- Lack of clear goals and objectives
- Lack of description of activities to be implemented
- No or little evidence of institutional support
- Sustainability not addressed
- Dissemination plan is generic and vague



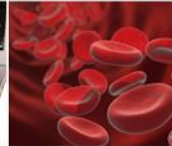
# Common Concerns Leading to Declined Proposals

- Evaluation plan is generic and vague and does not link to goals and objectives
- Underdeveloped data management plan
- Weak letters of support and/or no letters of support
- If students are in budget, no discussion on how students will be engaged or impact on students
- Proposal was not proof-read and has typos, font issues, illegible tables or charts
- Underdeveloped or weak Broader Impacts component



# Stay Informed

- Join the HBCU-UP List Serv
  - To subscribe:
    - 1) Send an e-mail to [LISTSERV@LISTSERV.NSF.GOV](mailto:LISTSERV@LISTSERV.NSF.GOV)
    - 2) Leave the subject line blank
    - 3) The body of the message should say: subscribe HBCU  
'your full name'
  - Example of the body of your message:
    - subscribe HBCU Percy Julian
- General Questions:
  - [HBCU\\_UP@nsf.gov](mailto:HBCU_UP@nsf.gov)



# HBCU-UP Team Contact Information

**Carleitta Paige-Anderson:**

[cpaigean@nsf.gov](mailto:cpaigean@nsf.gov)

(703)292-2816

**Minerva Cordero:**

[mcordero@nsf.gov](mailto:mcordero@nsf.gov)

(703) 292-4757

**Toni Edquist:**

[tedquist@nsf.gov](mailto:tedquist@nsf.gov)

(703) 292-4649

**Jeremy Guinn:**

[jguinn@nsf.gov](mailto:jguinn@nsf.gov)

(703) 292-8193

**Alfred Hall:**

[alfhall@nsf.gov](mailto:alfhall@nsf.gov)

(703) 292-4895

**LeRoy Jones II:**

[ljones@nsf.gov](mailto:ljones@nsf.gov)

(703) 292-4684

**Tori Rhoulac Smith:**

[tosmith@nsf.gov](mailto:tosmith@nsf.gov)

(703) 292-2315