Revised IOS Core Programs Solicitation Webinar

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Summary: Significant Programmatic Changes, Revised Core Programs Solicitation (16-505)

- SDS applications
  - Program change affecting plant symbioses of all types that formerly were submitted to the Symbiosis, Defense, and Self-recognition Program through the IOS Core Programs solicitation
  - A new joint solicitation from NSF IOS and the USDA National Institute of Food and Agriculture (NIFA) is forthcoming
- Two Tracks: Core and EDGE
  - No changes for Core track submission and review
  - Guidance for EDGE track solicitations
- Questions

<u>Solicitations</u> NOT affected by these changes include (but are not limited to):

- Plant Genome Research Program (PGRP)
- CAREER
- Research Coordination Networks – RCN
- Doctoral Dissertation Improvement Grants – DDIG
- DEB Core Programs solicitation (NSF 15-609)
- Dimensions of Biodiversity
- Ecology and Evolution of Infectious Diseases – EEID

The IOS core programs are:

Behavioral Systems Cluster:

Animal Behavior

Developmental Systems Cluster:

Plant, Fungal and Microbial Development
Animal Development
Evolution of Developmental Mechanisms

Neural Systems Cluster:

Organization
Activation
Modulation

Physiological and Structural Systems Cluster:

Symbiosis, Defense and Self-Recognition—***Significant Change***
Physiological Mechanisms and Biomechanics
Integrative Ecological Physiology

Core Track Submission and Review

- Essentially unchanged review process
  - Pre-proposals; Invited full proposals
  - Basic research, including collaborative and RUI applications
  - Still encourage young investigators to use this track as a way to vet CAREER research plans

Core Track Submission and Review

- Important dates:
  - Pre-proposal submission deadline: Jan. 15, 2016
  - Invited proposal submission deadline: Aug. 5, 2016

Change to Symbiosis, Defense, and Self-recognition (SDS) Program

- Proposals focused on plant symbioses of all types formerly submitted to SDS should be submitted to a new program, Plant-Biotic Interactions (PBI)
  - PBI jointly administered by IOS and USDA National Institute of Food and Agriculture (NIFA)
  - Expected full proposal submission deadline in April 2016 **to NSF via FastLane or Grants.gov**
  - Pre-proposals are not required
  - The PBI Program's focus on the fundamental processes supported by the SDS Program remains undiminished

Change to Symbiosis, Defense, and Self-recognition (SDS) Program

- Proposals on plant symbioses will no longer be accepted for review in the SDS Program of the Physiological and Structural Systems Cluster (PSS) through the IOS Core Programs solicitation
- No change in the review of proposals on animal symbioses, organelle acquisition, or symbioses among and between prokaryotes and protists.
  - Continue to submit these proposals to the SDS Program through the IOS Core Programs solicitation
  - SDS Program description has changed on PSS Cluster webpage

Rationale for Change to SDS Program

- PIs will be able to include basic research, applied research and translational research aims in proposals
- Synergistic advances in both basic research and agricultural translational research via joint review process

What is the EDGE track?

- EDGE: Enabling Discovery through Genomic Tools
- Purpose: Advance our understanding of the relationship between genomes and phenomes -- a grand challenge in biology
- Basis: Recognition that a lack of functional genomic tools, approaches, and associated infrastructure in emerging model organisms is a significant impediment to progress in a wide array of basic research fields focused on the structure and function of organisms

What is the EDGE track?

- Examples of relevant tools, approaches and infrastructure
  - Innovative approaches for establishing gene function
  - Development and testing of transformation approaches
  - Expansion of the use of gene editing, knock-out, and overexpression approaches in diverse organisms
  - Development of approaches and establishment of conditions for maintaining organisms to test and manipulate genetic function

EDGE TRACK Submissions

Proposals relevant to plant symbioses, and focused on development of functional genomic tools to enable genome manipulation, may be submitted to the EDGE track of the revised IOS Core Programs solicitation.

EDGE TRACK Submissions

- Letter of Intent (LOI) is required: Apr. 29, 2016
- Proposal submission deadline: June 1, 2016
- Pre-proposals are not required
- There are no PI/co-PI annual submission limits for the EDGE track
- Multi-institutional collaborative proposals should be submitted as one proposal by the lead organization, and should include sub-awards to the non-lead organizations

EDGE TRACK Submissions

- Letter of Intent (LOI): Apr. 29, 2016
  - LOIs are for review planning purposes only
  - LOIs are not externally evaluated nor are they used to determine funding
  - LOIs are non-binding on the PIs and institutions

EDGE TRACK Submissions

- Letter of Intent must include
  - A list of up to 5 **Senior Personnel**, including the PI
  - A list of up to 5 **participating organizations** (confirmed or planned) including the lead organization
  - A **synopsis** up to 2500 characters
    - Organism(s) to be used
    - General approaches to development of tools to enable these organisms
  - Description of **impacted communities** up to 2500 characters
    - One or more research communities to benefit
    - Bottlenecks in using functional genomics to test cause-and-effect between genes and phenotypes

EDGE TRACK Submissions

- Submission Deadline: June 1, 2016
  - Title: IOS EDGE:_____.
  - Project Description, not to exceed 15 pages.
    - Challenges to enabling emerging model organisms and community impact.
    - Experimental Approach.
    - Dissemination and Education Plan
  - Project Management Plan, not to exceed 3 pages, must be included as a Supplementary Document for those projects that involve one or more organizations as sub -awardees of the lead organization.

EDGE TRACK Submissions:

1. Challenges to enabling emerging model organisms and community impact

This section should include, but is not limited to:

- Justification of the selection of organism(s) that will be used
- Identification of bottlenecks to functional genomics questions linking cause and effect in these organisms
- Identification of one or more research communities and/or research areas that will benefit from the proposed project
- Description of any impediments the communities may face in employing the proposed tools.
- Discussion of the proposed research in the context of existing technologies

EDGE TRACK Submissions:

2. Experimental Approach

This section should include:

- Goals
- Strategies
- Approaches
- Methods

EDGE TRACK Submissions:

3. Dissemination and Education Plan

*This section **MUST** be included within the required sub-section "Broader Impacts of the Proposed Work" in the Project Description, and should describe, but is not limited to:*

- How enabling tools will be rapidly disseminated
- How training will be provided (if necessary) to maximize the impact on the research community. How will outreach to the community be achieved
- How many researchers will be trained
- How reagents and other resources will be maintained and disseminated

EDGE TRACK Submissions:

3. Dissemination and Education Plan

- The Dissemination and Education Plan does not preclude description of other broader impacts of the project
- A description of other broader impacts is strongly encouraged

Why EDGE?

- Lack of functional genomic tools to test cause-and-effect relationships between genes and phenotypes is frequently identified as an impediment to research progress
- This impediment affects all research areas supported by IOS
- Existing genome-enabled models are frequently unsuitable to address basic research questions in organismal science supported by IOS
- PI community and the science will benefit from increased capacity to use these tools

Grant Proposal Guide and the BIO Proposal Classification Form

- *If a guideline is not specified in the IOS Core Programs solicitation, follow the guidance in the NSF GPG*
- Please remember to fill out the BIO Proposal Classification Form
  - You are the expert in your research; the form helps us manage the conceptual areas that IOS supports, and the review of your proposal

QUESTIONS?

- This Webinar will be posted as presented for on-demand viewing at a later time
  - *Webinar URL on the IOS blog* http://nsfiosinfocus.wordpress.com
  - *Link to Solicitation NSF 16-505* *http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=503623&ods_key=nsf16505*
  - *Link to FAQ* *http://www.nsf.gov/pubs/2016/nsf16017/nsf16017.jsp*
- Email questions to any IOS Program Director:
  - see IOS website for addresses: http://www.nsf.gov/staff/staff_list.jsp?org=IOS&from_org=IOS
- *Concerns can also be directed to:*
  - *IOS Acting Division Director – Rob Miller* rmiller@nsf.gov
  - *Assistant Director for Biological Sciences – Jim Olds* *jolds@nsf.gov*