

Advice on NSF Research Proposal Development

John Tsapogas

Marina Vasilyeva

Research Foundation-City University of New York
Office of Award Pre-Proposal Support (APPS)



Five Key Points

Point #1

A great idea

Point #2

Knowledge & experience to carry the research

Point #3

A solid proposal for conducting the research

Point #4

Resources to do what you propose to do

Point #5

Ability to evaluate your results

In a Nutshell

A good proposal is a good idea, well expressed, with a clear indication of methods for pursuing the idea, evaluating the findings, making them known to all who need to know, and indicating the broader impacts of the activity

Getting Started

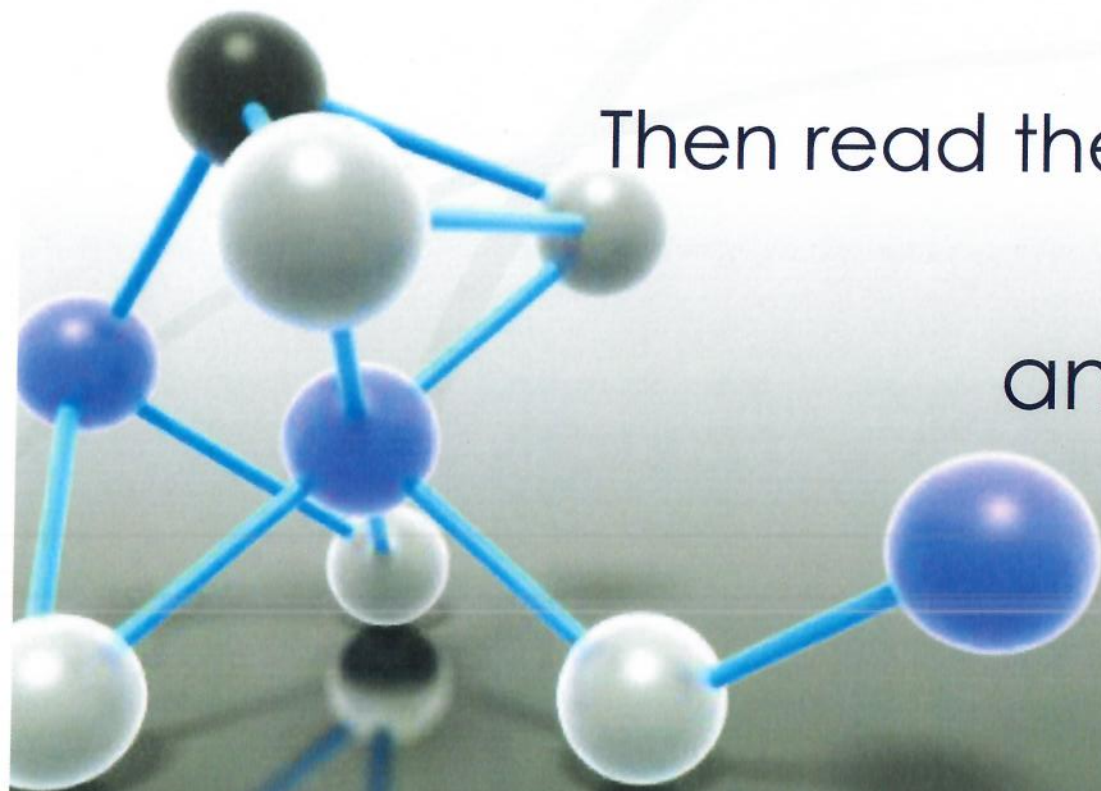
Helpful Hint

Carefully read: (1) the NSF Grant Proposal Guide
(2) Program Announcements
(3) Solicitations

Then read them again!

and again!

and again!



Proposal Development

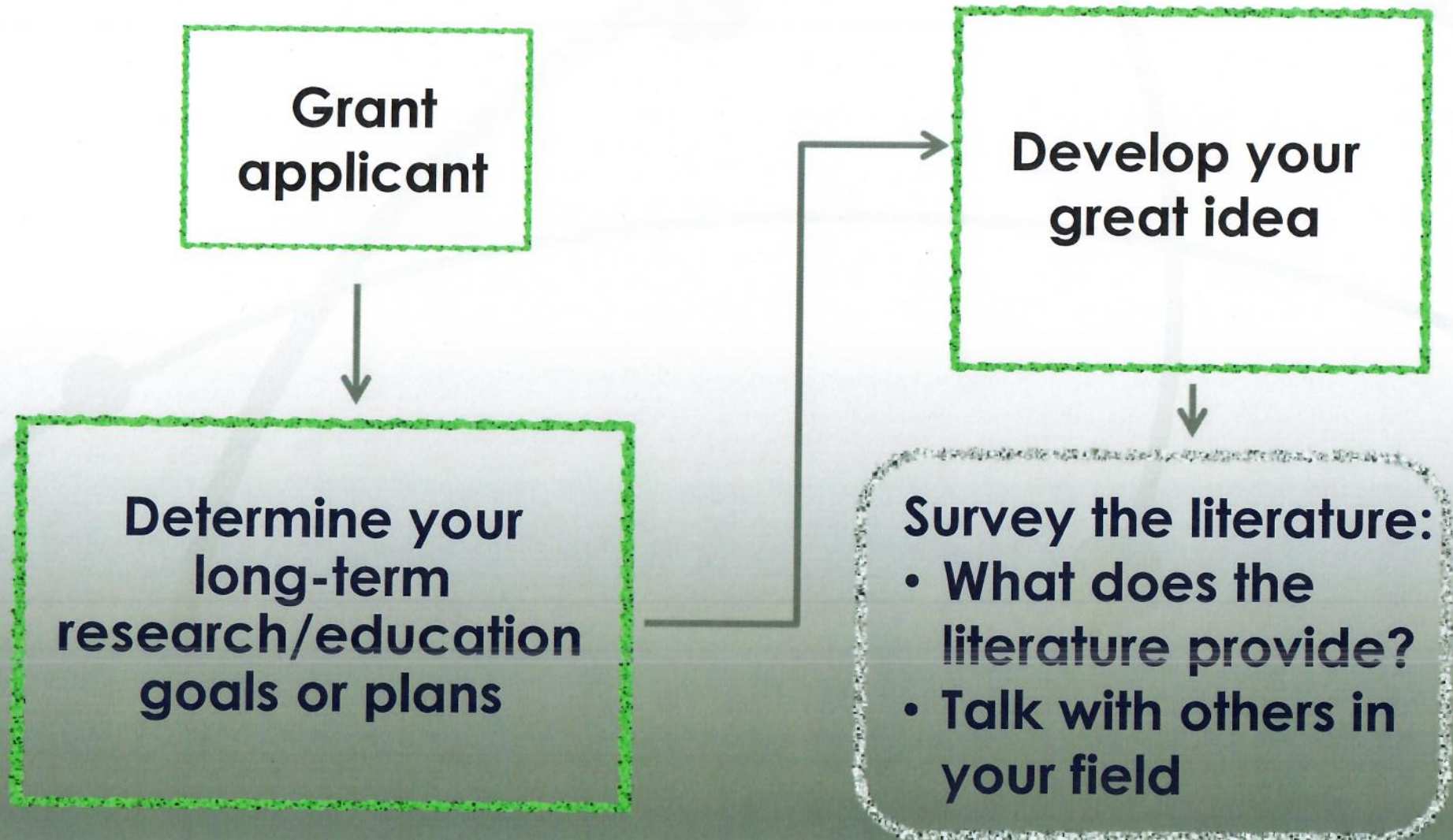
Key Questions for Prospective Investigators

- What do you intend to do? (hypotheses, research questions)
- Why is the work important?
- Why is the work unique and on the cutting edge?
- What has already been done? (literature review, status of current research)
- What are you adding to existing knowledge?
- How are you going to do the work? (structure, organization, staffing)
- How will the work be evaluated and managed?

Proposal Development Strategies

Where Are You in Your Career?

Where Are You in Your Discipline?



Proposal Development Strategies

What Do You Need (Besides Money)?



Prepare to do the project:

- Determine available resources
- Realistically assess needs
- Develop preliminary data
- Present to colleagues/mentors/students



Determine possible funding sources:

- Is NSF the right source?
- Private Foundation?
- State or local government?

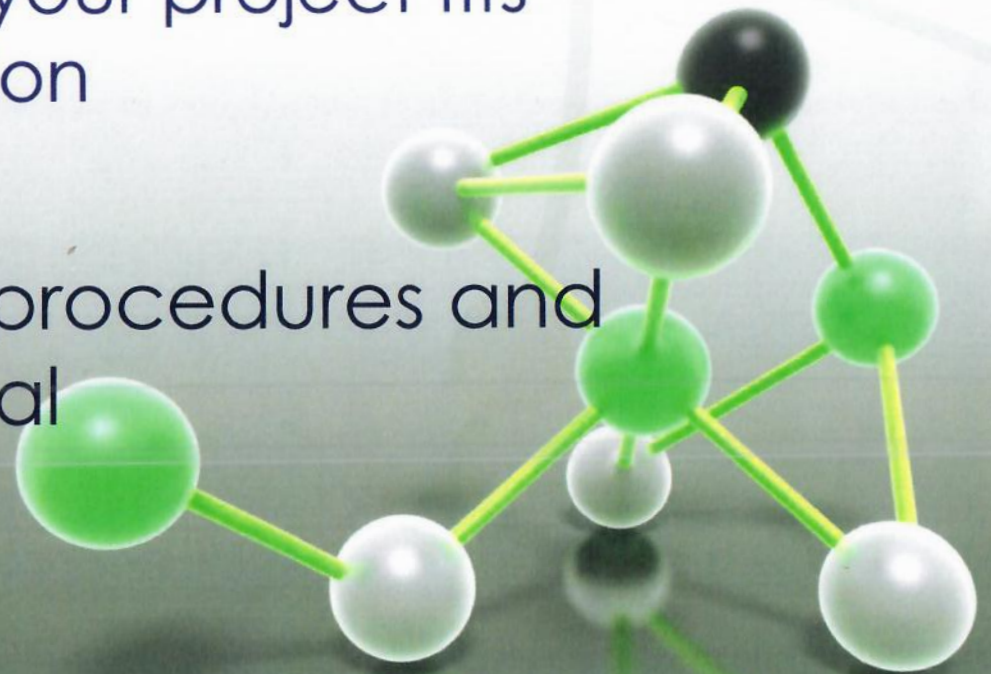
Proposal Development Strategies

What Do You Need To Know About The Solicitation?

Ascertain overall scope and mission

- Carefully read solicitation instructions
- Determine where your project fits under the solicitation

Ascertain evaluation procedures and criteria for the proposal



Proposal Development Strategies

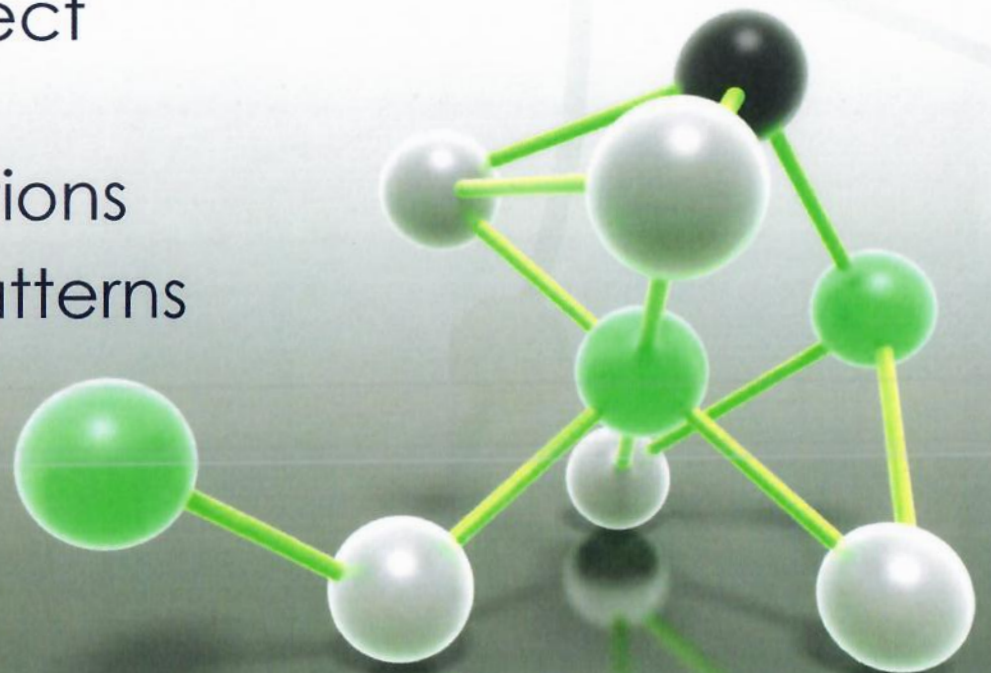
To Whom Do You Talk?

Talk to us, RFCUNY Office of APPS:

- Advice on anything

Talk with NSF Program Director:

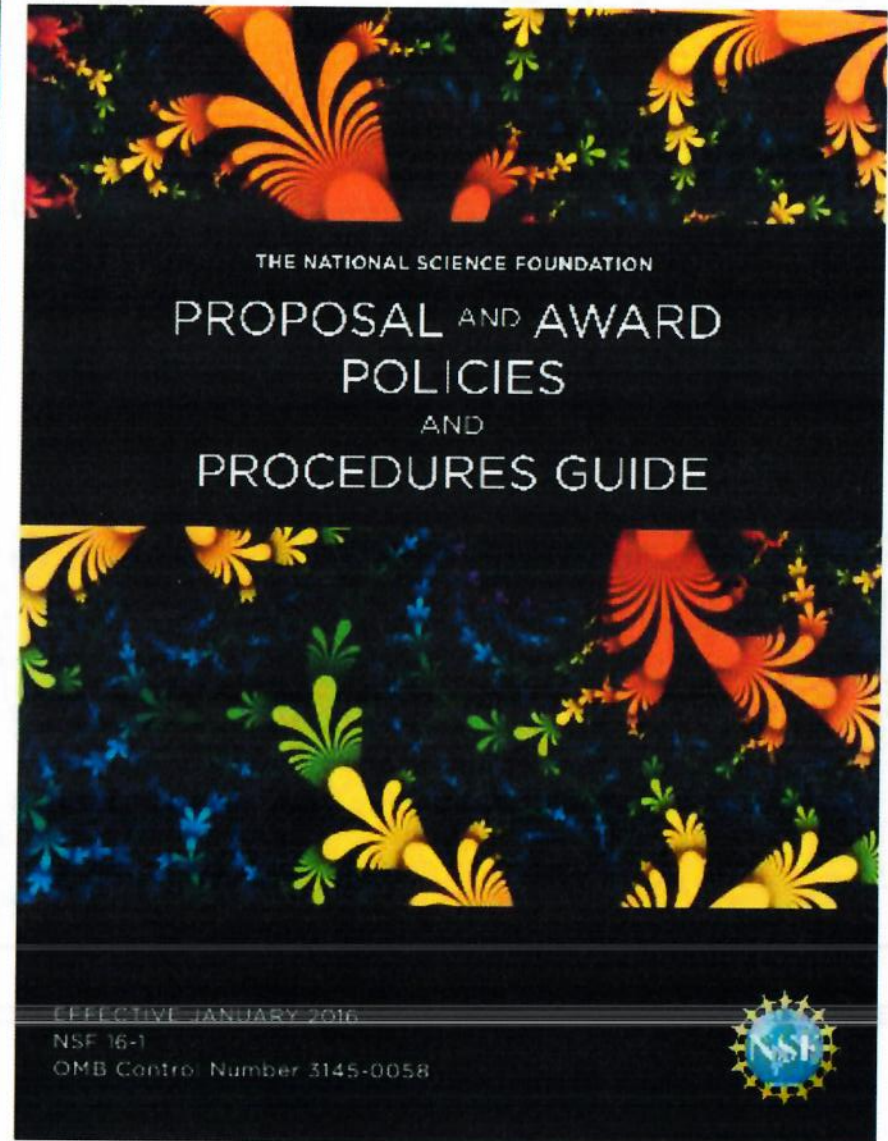
- Your proposed project
- Specific program requirements/limitations
- Current program patterns



The Proposal

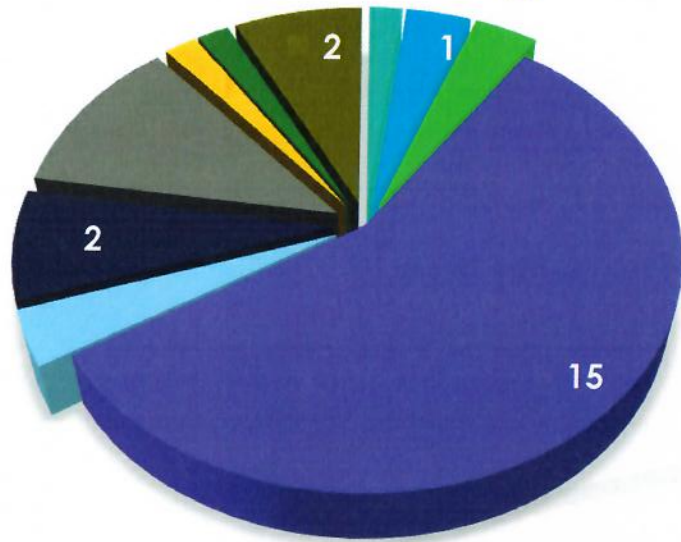
Major Resource

- NSF Proposal and Award Policies and Procedures Guide (PAPPG)
- Effective: January 26, 2016



Proposal Checklist

General & Page Limit



Margins: one inch on all four sides

Fonts: (in black): Arial, Helvetica, Palatino Linotype (10 points or larger) or Computer Modern, Times New Roman (11 points or larger)

Formatting: single column

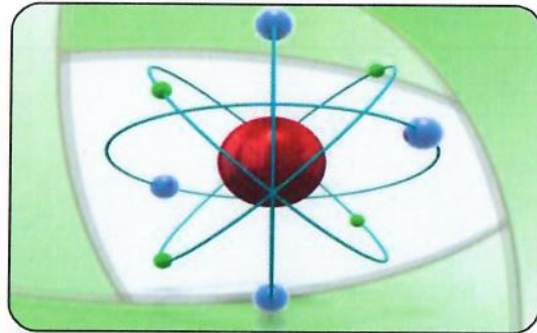
- Cover sheet and certifications
- Project summary
- Table of contents (auto-generated)
- Project description
- References cited
- Biographical sketches (per person)
- Budgets and justification
- Current and pending support
- Facilities, equipment and other resources
- Supplementary Documents

Project Summary

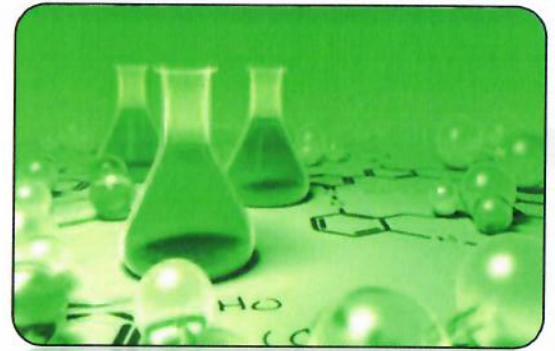
1 page limit but must address 3 sections



- **Overview** includes objectives and methods you will employ
- It may affect which program or panel will review your proposal



- **Intellectual Merit** must be clearly addressed in a separate statement

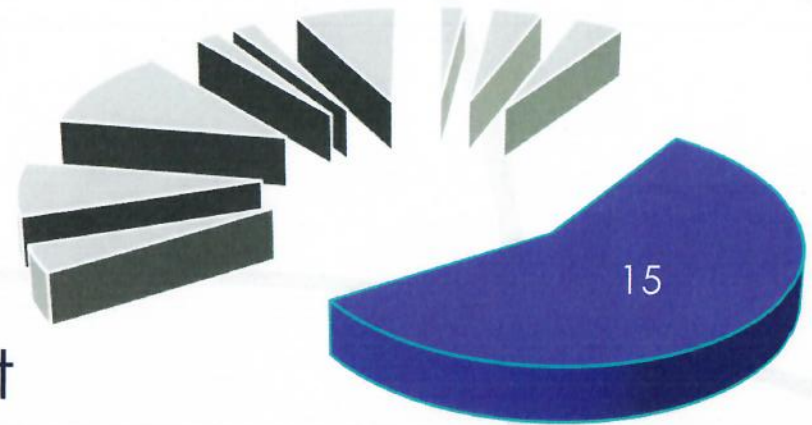


- **Broader Impacts** from the proposed research must be explicitly stated

Project Description

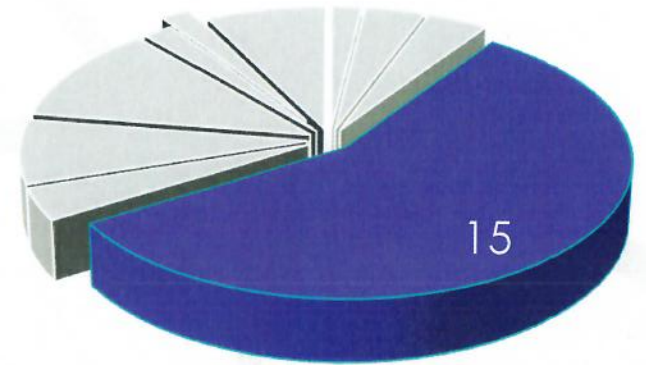
15 page limit

- Objectives & expected significance
- Broader Impacts
- Relation to present state of knowledge
- Methods & procedures
- Results from prior NSF support
 - Required for all PI/Co-PIs with NSF funding in past 5 years/limited to 5 pages within 15-page limit/include **Intellectual Merit & Broader Impacts** for each of your past projects
- Relation to the PI's longer term goals
- Optional: •preface •background
•preliminary studies •specific objectives •significance



Project Description

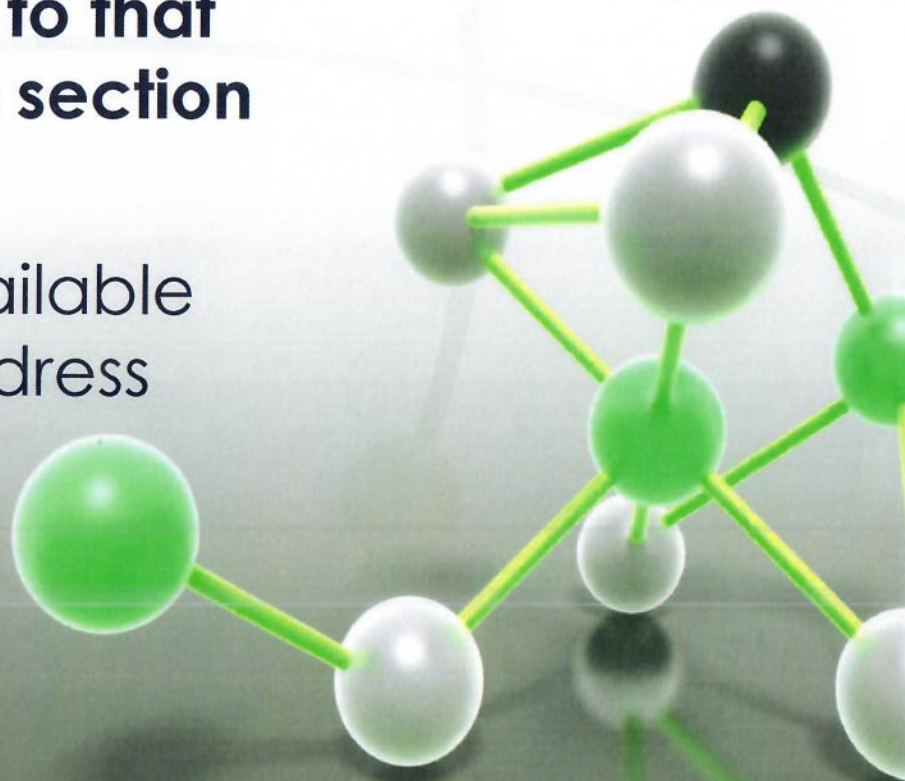
continued



- Know your audience – the reviewers!
- Think about the reviewers
- Write accurately, concisely & clearly
- Make it easy for reviewers to like your proposal
- Let your first page tell it all
- Figures and tables get your point across effectively
- Some reviewers (particularly on inter-/multi-disciplinary proposals) might not be an expert in your specific field but may be used to provide broader perspective

References Cited

- Include **only** bibliographic citations
- List all authors (do not use “et al.” form)
- **If none are cited, a statement to that effect must be included in this section**
- If the reference material is available electronically, the website address should be included



Biographical Sketch

2 page limit per person

- Professional preparation
- Appointments
- Publications: 5 closely related & 5 other significant
- Synergistic activities
- Collaborators & other affiliations
 - Collaborators for last 4 & co-editors for last 2 years
 - Graduate & Postdoctoral Advisees for 5 years
 - Thesis advisor & postdoctoral sponsor

Budget & Justification

Justification: 3 page limit

- Proposed costs should be:
 - Allowable, reasonable, allocable in accordance with Uniform Administrative Requirements, Cost Principles and Audit Requirements for Federal Awards issued by OMB on 12/26/13 and effective on 12/26/14
 - Complete and account for your time & effort, personnel, student-related, collaborator, & indirect costs at the rate negotiated for your campus
- Inclusion of voluntary committed cost sharing is prohibited in proposals
- Justification includes explanation for all direct costs, adjustments for inflation, and indirect costs.

Current & Pending Support

List this proposal as “pending”

- List outside support from all sources for the PI & other key/senior personnel, including all proposals that are currently under consideration by NSF and other sponsors and the one(s) that is/are being submitted
- Disclose total award amount for each project
- Be careful of overlap: perception of overlap could be detrimental in the review
- Avoid dual submissions unless allowed

Facilities Equipment & Other Resources

Always required

- Describe (do not quantify) resources that are required to the proposed work
- Facilities, Equipment and Other Resources section is required. If there are none, a statement to that effect must be included in this section

Supplementary Documents

Data Management Plan: 2 page limit

Postdoctoral Mentoring Plan: 1 page limit

- Data Management Plan:
 - Describe the data you expect to generate/use during the course of a research project
 - Address how the data will be analyzed, managed, and stored
 - State how the data will be shared: institutional policy for data access and sharing, including provisions for appropriate protection of privacy, confidentiality, security, intellectual property
- Postdoctoral Mentoring Plan: only if research involves postdocs
- Other documents as applicable

Why Are Some Proposals Declined?

- Absence of innovative ideas or hypothesis
 - Will provide only an incremental advance
 - Not exciting or cutting edge
- Errors
 - Unclear or incomplete expression of aims
 - Faulty logic or experimental design
 - Less than rigorous presentation
- Resources and facilities not in place
 - PI qualifications/expertise not evident
 - Necessary collaborations not documented

Why are some proposals returned without review?

- **Bio sketch section incomplete or not properly presented:**
 - Incomplete list of all authors of each publication
(Do not use et al., use full names)
 - Title missing
- **Current and pending support section:**
 - Incomplete – required for each PI, co-PI, and senior project personnel
 - Include the project you are applying for now as ‘pending’
- **Letter of commitment:**
 - Goes beyond a brief statement confirming collaboration
- **Font sizes and margins:**
 - See GPG for allowed font sizes and margins

Need Help with a Proposal, Review & Resubmit a Declined Proposal, or Have a General Question



Contact RFCUNY, Office of Award Pre-Proposal Support

John Tsapogas

Director

230 West 41 Street, New York, NY, 10036

Phone: 212-417-8508

email: John_Tsapogas@rfcuny.org

Marina Vasilyeva

Acting Associate Director

230 West 41 Street, New York, NY, 10036

Phone: 212-417-8450

Email: Marina_Vasilyeva@rfcuny.org