R^2 Grant Preparation "Boot Camp"

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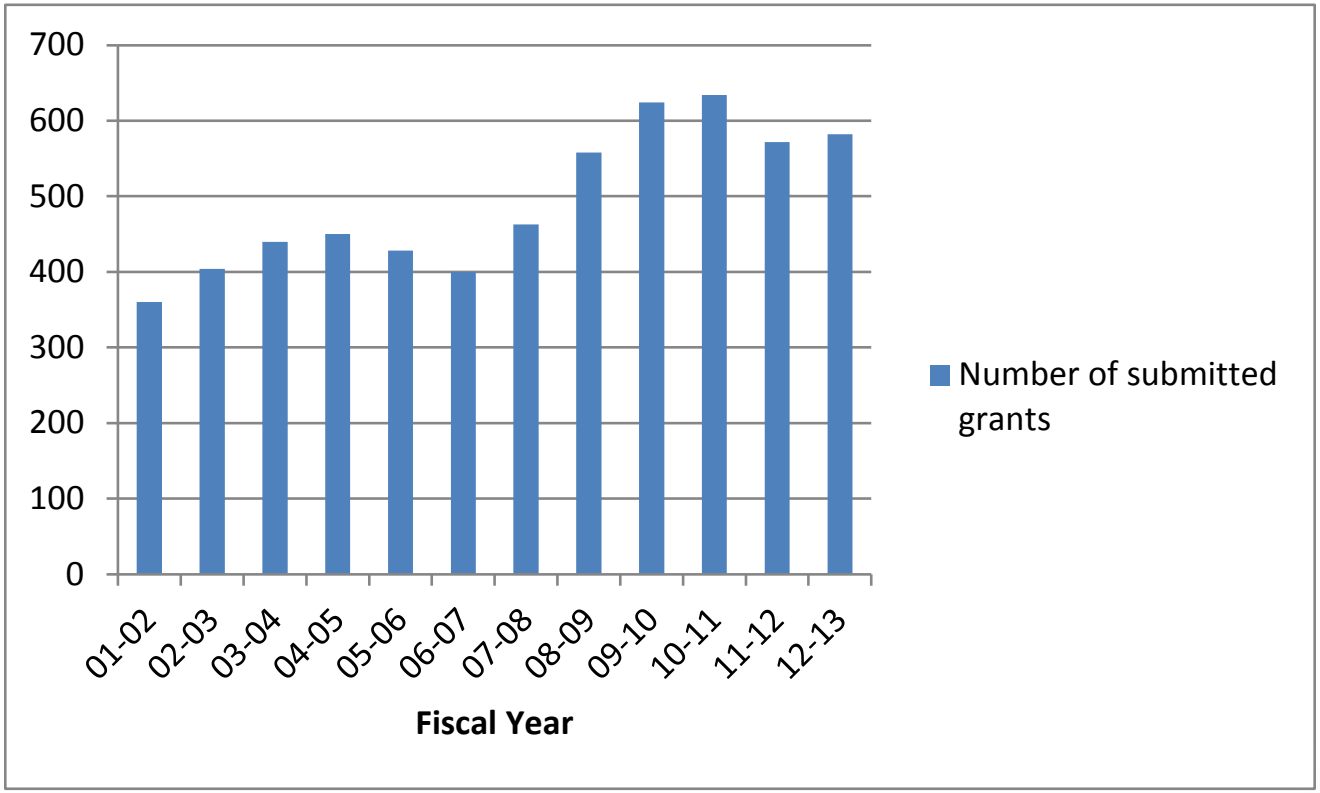
Columbia University
MAILMAN SCHOOL
OF PUBLIC HEALTH

Research Resources (R^2) Office

Why is Sponsored Research Important at MSPH?

- In FY 2013:
  - 582 grants were submitted by MSPH faculty
  - Total of $428,351,722 in direct costs
  - Total of $127,555,872 in indirect costs
  - 78.7% were for government sponsored grants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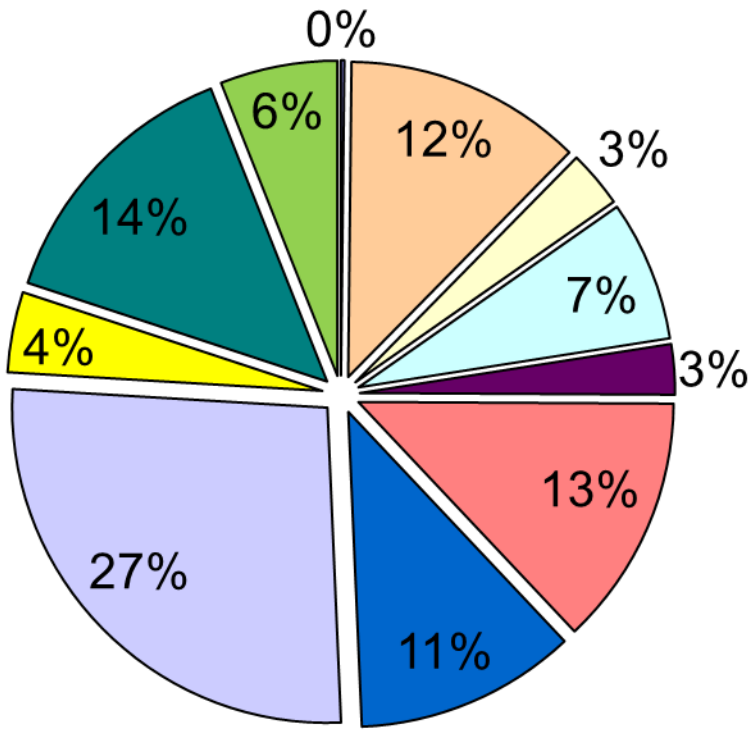
Fiscal Year
Number of submitted grants

Number of Proposals



- Dean's Office:(Global Center & Student Services)
- ICAP
- NCDP
- Biostatistics
- NCCP
- Population & Family Health
- Environmental Health Sciences
- Epidemiology
- Health Policy & Management
- Sociomedical Sciences
- CII

Overview of Application Preparation

- 3 Preliminary Steps:
  - Planning application
  - Preparing application
  - Submitting application
- As Principal Investigator (PI), you need to manage science and logistics.
- Your Department Administrator (DA), mentor, and R^2 can help!

PLANNING APPLICATION

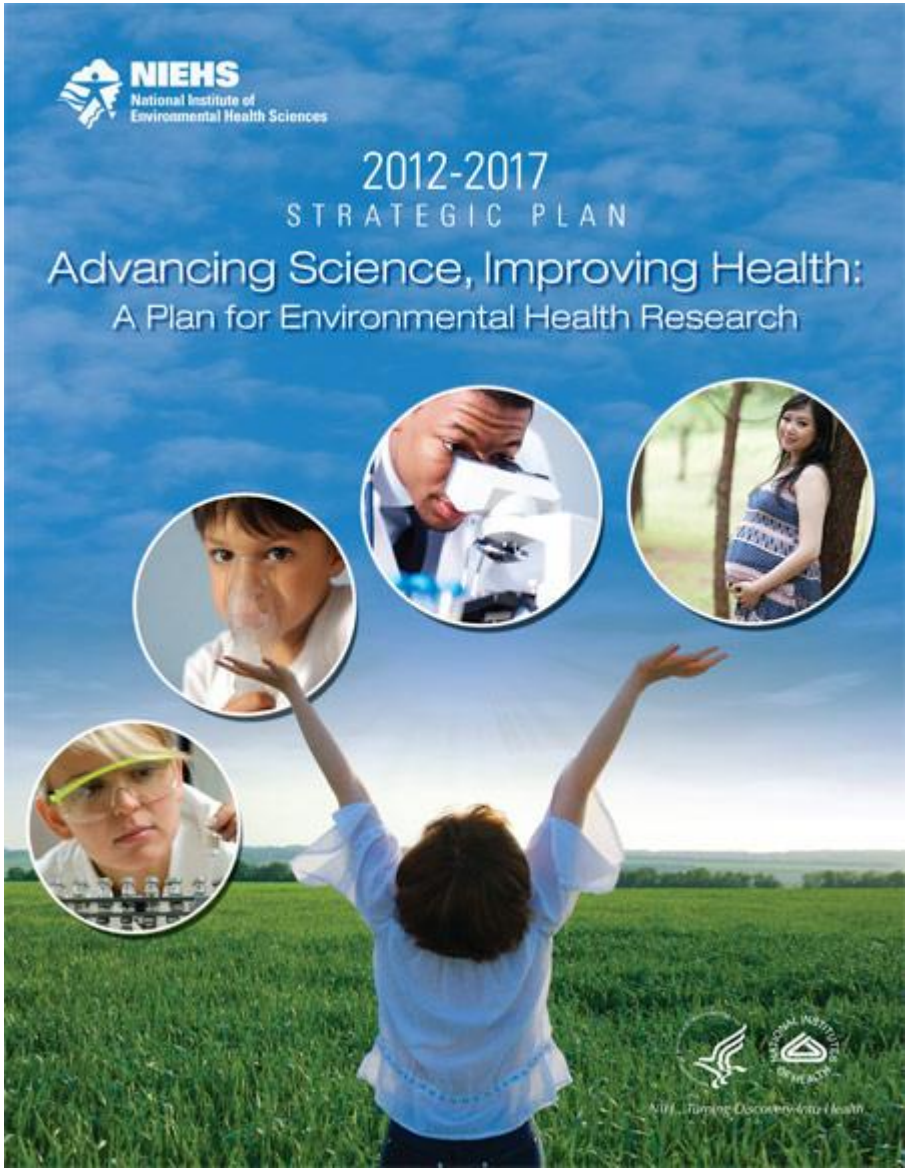
Finding Funding Opportunity:

- Grants.gov – keyword search
- List of major funding sources : http://www.mailman.columbia.edu/faculty-staff/research-resources-r2-office/funding-resources
- List of funding opportunities in key areas: http://www.mailman.columbia.edu/faculty-staff/research-resources-r2-office/funding-opportunities-key-areas
- R^2 can help identify appropriate funding opportunities

PLANNING APPLICATION

Evaluate Funding Opportunity Appropriateness:

- Carefully review funding opportunity announcement (FOA)
- Review Institute/ funding agency's mission and goals
- Determine fit of mechanism (e.g., R01, R21, R03, K01) to project scope, preliminary studies, timing, feasibility, stage in career.
- Work with DA, mentor, and/or R^2 to evaluate appropriateness.


NIEHS
National Institute of Environmental Health Sciences
2012-2017
STRATEGIC PLAN
Advancing Science, Improving Health:
A Plan for Environmental Health Research

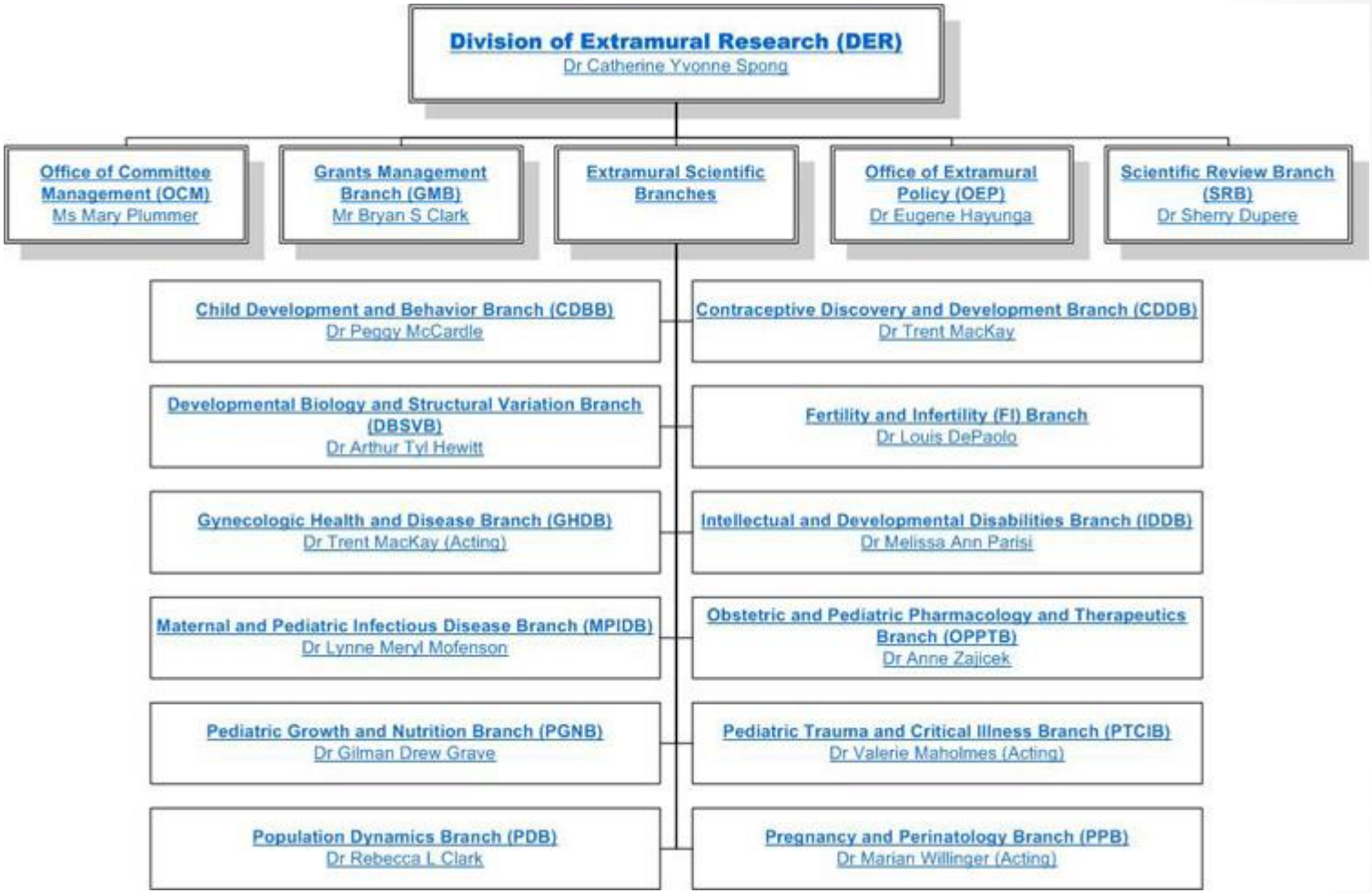
NICHD Mission and Scientific Accomplishments

The mission of the NICHD is to ensure that every person is born healthy and wanted, that women suffer no harmful effects from reproductive processes, and that all children have the chance to achieve their full potential for healthy and productive lives, free from disease or disability, and to ensure the health, productivity, independence, and well-being of all people through optimal rehabilitation.

Extramural Scientific Branches

The DER includes 12 Branches that support scientific research projects and training across a variety of topics relevant to the NICHD mission. These Branches are listed below.

Child Development and Behavior Branch (CDBB)
Contraceptive Discovery and Development Branch (CDDB)
Developmental Biology and Structural Variation Branch (DBSVB)
Fertility and Infertility (FI) Branch
Gynecologic Health and Disease Branch (GHDB)
Intellectual and Developmental Disabilities Branch (IDDB)
Maternal and Pediatric Infectious Disease Branch (MPIDB)
Obstetric and Pediatric Pharmacology and Therapeutics Branch (OPPTB)


Division of Extramural Research (DER)
Dr Catherine Yvonne Spong
Office of Committee Management (OCM)
Ms Mary Plummer
Grants Management Branch (GMB)
Mr Bryan S Clark
Extramural Scientific Branches
Office of Extramural Policy (OEP)
Dr Eugene Hayunga
Scientific Review Branch (SRB)
Dr Sherry Dupere
Child Development and Behavior Branch (CDBB)
Dr Peggy McCardle
Contraceptive Discovery and Development Branch (CDDB)
Dr Trent MacKay
Developmental Biology and Structural Variation Branch (DBSVB)
Dr Arthur Tyl Hewitt
Fertility and Infertility (FI) Branch
Dr Louis DePaolo
Gynecologic Health and Disease Branch (GHDB)
Dr Trent MacKay (Acting)
Intellectual and Developmental Disabilities Branch (IDDB)
Dr Melissa Ann Parisi
Maternal and Pediatric Infectious Disease Branch (MPIDB)
Dr Lynne Meryl Mofenson
Obstetric and Pediatric Pharmacology and Therapeutics Branch (OPPTB)
Dr Anne Zajicek
Pediatric Growth and Nutrition Branch (PGNB)
Dr Gilman Drew Grave
Pediatric Trauma and Critical Illness Branch (PTCIB)
Dr Valerie Maholmes (Acting)
Population Dynamics Branch (PDB)
Dr Rebecca L Clark
Pregnancy and Perinatology Branch (PPB)
Dr Marian Willinger (Acting)

http://grants.nih.gov/grants/grants_process.htm

- Grants Process Overview
- Any successful project requires planning, development, implementation, and follow-through. Obtaining NIH funding for your research idea is no exception. The Grants Process Overview below provides an overview of the steps required for an application to proceed from application planning and submission through award and close out. Look to the related resources on each page for special guidance from NIH experts that can help maximize your understanding of the grants process and help you submit a successful grant application.

http://grants.nih.gov/grants/funding/funding_program.htm

- Types of Grant Programs
- NIH uses activity codes (e.g. R01, R43, etc.) to differentiate the wide variety of research-related programs we support. NIH Institutes and Centers (ICs) may vary in the way they use activity codes; not all ICs accept applications for all types of grant programs or they apply specialized eligibility criteria. Look closely at Funding Opportunity Announcements (FOAs) to determine which ICs participate and the specifics of eligibility

- Research Grants (R series)
- Career Development Awards (K series)
- Research Training and Fellowships (T & F series)
- Program Project/Center Grants (P series)
- Resource Grants (various series)
- Trans-NIH Programs

OTHER RESOURCES

- Irving Institute, Clinical and Translational Research (CTSA)
  - Bioinformatics resource
  - Clinical research resource
  - Community engagement (including space to see research subjects)
  - Biomarkers core/ research pharmacy
  - Design and biostatistics

OTHER RESOURCES

- CTSA Opportunities
  - CTO pilot awards (must have P&S appointment)
  - CaMPR (collaborative and multidisciplinary pilot research awards)
  - Reach for the First (R01) class (must apply) – Fall and Spring

PLANNING APPLICATION

- *Review application components:*

- R^2 Grant application checklists: http://www.mailman.columbia.edu/faculty-staff/research-resources-r2-office/grant-resources/preparing-grant-proposal

- SF424 R&R Application guide for PHS funding agencies: http://grants.nih.gov/grants/funding/424/#inst

- Sponsored Projects Administration (SPA) Application Checklist and Pre-submission Checklists: http://www.mailman.columbia.edu/faculty-staff/office-research-administration/sponsored-projects-application-resources

REQUIRED TRAINING COURSES: GENERAL

- Workplace discrimination and Harassment: "Doing the Right Thing"- http://hr.columbia.edu/learn-dev
- Financial Conflicts of Interest and Research: TC1450*
- Mentoring at Columbia for Mentors and Mentees: TC0027*
- Effort Reporting Training: TC0068*

*Accessible through RASCAL training center: https://www.rascal.columbia.edu/servlet/edu.columbia.rascal.presentation.tc.servlets.TCMainServlet

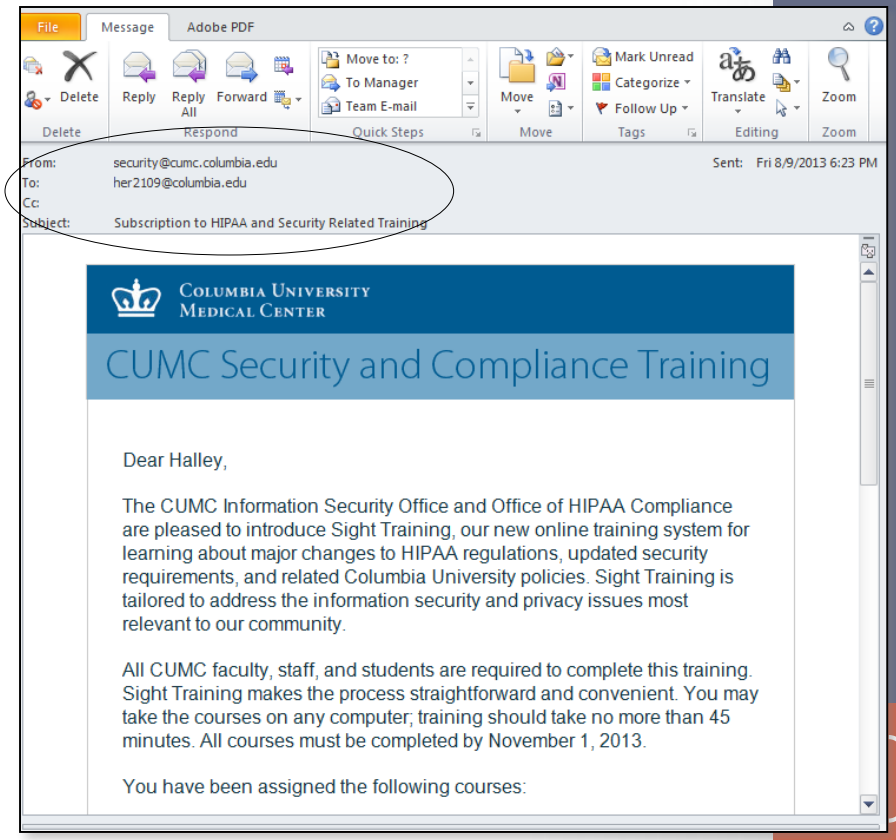
REQUIRED TRAINING COURSES: HUMAN SUBJECTS RESEARCH

- HIPAA: Health Insurance Portability Accountability Act Research Training Course: TC0019*
- Human Subjects Protection Training (includes Minors and FDA): TC0087*

*Accessible through RASCAL training center: https://www.rascal.columbia.edu/servlet/edu.columbia.rascal.presentation.tc.servlets.TCMainServlet

CUMC SECURITY AND COMPLIANCE TRAINING

- All faculty members, staff, and students will receive an email from security@cumc.columbia.edu with instructions to complete HIPAA and Data Security trainings.
- Completed training at: https://columbiatraining.sighttraining.com/ (uni and password required)



REQUIRED TRAINING COURSES: LABORATORY SAFETY (IF APPLICABLE)

- Laboratory Safety and Hazardous Waste Management Training: TC0021*
- Shipping Biological (infectious and potentially infectious): TC0022*
- Bloodborne Pathogens/Infection Control Training for Personnel in Human: TC0025*

Accessible through RASCAL training center: https://www.rascal.columbia.edu/servlet/edu.columbia.rascal.presentation.tc.servlets.TCMainServlet

PLANNING YOUR APPLICATION

- *Logistics*:

- Inform DA/ grants manager of intent to submit ASAP
- Develop proposal timeline and discuss how steps will be divided
- Register at eRA Commons, if applicable.
- For limited competition opportunity (only one application per institution allowed by funding agency), a preliminary internal competition/review may be necessary.
- Application draft is due to the research administration office 10 business days before agency deadline and must be ready for submission 5 business days before the agency deadline!

PLANNING YOUR APPLICATION

- *Science:*
  - If applicable, search NIH RePorter for projects funded on your topic/ by your institute/center
  - Contact R^2 to see a model funded grant.
  - Outline specific aims/ draft brief project description
  - Draft list of potential collaborators to contact
    - Clarify roles in proposed project.
  - Begin thinking about what the project will cost
    - Discuss budget with DA

PLANNING YOUR APPLICATION

- *Soliciting Input:*
  - Discuss proposed project with your mentor(s), Department Chair, colleagues, etc.
  - Call program officer/ funding agency contact (if applicable) for input on project idea.
  - Circulate specific aims to potential collaborators and determine who will be on grant.
  - Obtain written commitment from all collaborators and partner organizations (e.g., data collection sites).

PLANNING YOUR APPLICATION

Planning your Writing:

- Outline:
  - Introduction/ background
  - Methods/ research strategy
  - Significance and innovation (NIH applications).
- **Consult with Biostatistics**

- Determine which parts you will write and which your collaborators will write
- Ensure that all members of the team understand distribution of writing.
- Final edit must sound like one person wrote the entire proposal!!

PREPARING YOUR APPLICATION

- *Specific aims*:
  - Most critical part of your grant
  - Start early!
  - Refine repeatedly
  - Ask collaborators, mentors, and colleagues to review
  - Make sure that aims are clear and realistic
  - Attend R^{2}'s workshop on *"Writing Clear, Superior and Innovative Specific Aims"*: Tuesday, October 21th from 2-3:30 in Hess Commons.

PREPARING YOUR APPLICATION

- *Budget*:
  - Determine whether FOA's allowable budget includes direct and indirect costs.
  - Determine whether funding mechanism offers full *indirect costs.*
    - If not, your DA can help you figure out how you should deal with this.
  - Speak with your DA/ grants manager about your role in developing budget
    - Will you create the spreadsheet or just provide costs to your DA?

PREPARING YOUR APPLICATION

- *Budget*:
  - If you will be developing budget spreadsheet, request template from DA/ grants manager.
    - A budget template can be found here: http://webdev.mailman.columbia.edu/sites/default/files/SPA_Suggested_Budget_Template.xlsx
  - Estimate total project costs, including:
    - Percent effort for all collaborators (DAs/ grants manager will access salary info)
    - Project costs (including travel, data management, HPC, biostatistics, supplies, telephone, etc!)
  - If your application includes a sub-contract, your DA/ grants manager will help you with additional materials.

PREPARING YOUR APPLICATION

- *Letters of Support*:
  - If you name an organization/ individual collaborator in your application, you need a letter of support (LOS) from them.
  - Offer to draft LOS's on collaborators' behalf
  - Include:
    - Strengths/ significance of application
    - Collaborator's role (co-investigator, consultant, advisory board member, collaborating organization leader)
    - Collaborator's responsibilities on grant
    - Payment (if applicable)
  - Follow up after initial request; be clear about deadlines.
  - Track status of letters on a spreadsheet/checklist.

PREPARING YOUR APPLICATION

- *Grant Narrative*:
  - Start early! A well-written grant will require many revisions.
  - Keep Institute/ funding agency's priorities in mind while writing.
  - Obtain all portions of the text that have been prepared by collaborators and integrate them into a comprehensive narrative; edit for style and formatting consistency.
  - Circulate drafts to collaborators
  - Circulate "completed" draft to mentors and colleagues not on grant writing team for review.
  - Leave yourself a few days for final review prior to submission.

PREPARING YOUR APPLICATION

- *Additional grant components:*
  - Make checklist that includes all grant components and person responsible for them
  - R^2 can provide instructions, templates, and samples for components of many grant mechanisms (e.g., biosketches, facilities and resources information, human subjects protection, cover letters).
  - Every part of the grant is important and should contribute to "selling" your proposal!
  - Leave yourself enough time to complete all portions of the grant application; don't assume that supporting components can be prepared quickly.

SUBMITTING YOUR APPLICATION

- *Additional grant components:*
  - Establish with DA/grants manager who will be responsible for which portion of application to ensure a timely submission.
  - For a cover letter to NIH, you should specify an appropriate review committee and the correct institute: http://www.csr.nih.gov/committees/rosterindex.asp
  - Determine file format (.doc, PDF) in which your department expects to receive application.
  - Once your department has reviewed your application, they will forward it to SPA
  - SPA then reviews and submits once they have approved
    - SPA or your Department may contact you with questions or corrections
  - Pay attention to internal deadlines. These are vital to ensure that your department and SPA have time to review your application.
  - Monitor your email:
    - You may receive error or warning messages (e.g., for NIH submissions). Discuss with your DA and address errors immediately.

POST-SUBMISSION

- *After Submission*
  - Application will be reviewed
  - You receive feedback (NIH: Score and summary sheets)
  - If fundable: You will be asked for "Just in Time" paperwork which includes your response to reviewers, IRB approval if applicable, etc.
    - Your DA/grants manager can help you prepare these documents
  - If not fundable: consider resubmission
  - NIH review info and tips:
    - http://www.youtube.com/watch?v=fBDxI6l4dOA
    - http://www.youtube.com/watch?v=9cNRMsCGfHo

R² WEBSITE

http://www.mailman.columbia.edu/faculty-staff/research-resources-r2-office

- Highlights:
- Funding Resources
- Funding Opportunities in Key Areas
- New and Early Stage Investigators
- Grant Proposal Resources
- Model Grants Library
- Information Sessions
- Interdisciplinary Science

R^2 CONTACT INFORMATION

- Dr. Pam Factor-Litvak
- Associate Dean for Research Resources
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New York, NY 10032
212 305 7851
- prf1@columbia.edu

Website:

- http://www.mailman.columbia.edu/faculty-staff/research-resources-r2-office