

**University of Maryland
School of Nursing
Office of Research and
Scholarship**

DL-NRSResearch@umaryland.edu

**INVESTIGATOR'S GUIDE TO
PRE- AND POST-AWARD
GRANT MANAGEMENT**

INTRODUCTION

The purpose of this booklet is to allow investigators to successfully manage the Pre- and Post-Award process while adhering to University of Maryland, Baltimore (UMB) and University of Maryland School of Nursing (UMSON) regulations. There is no way to anticipate every situation, but we will provide procedures and policies that cover many commonly encountered issues related to preparing and managing your grants.

PRINCIPAL INVESTIGATORS' RESPONSIBILITIES

Principal investigators (PIs) are ultimately responsible for all aspects of their sponsored projects, including scholarly activity and proper stewardship of awards. This guide addresses a number of key PI responsibilities for oversight and management of sponsored projects.

Sponsored Projects Principal Investigator Responsibility:

<https://www.umaryland.edu/ord/investigator-toolkit/principal-investigator-quick-reference/>

Proposal Development and Submission

The PI should:

- work with the unit administrative manager to develop proposals with sufficient time for review and approval
- meet unit, school, and sponsor due dates
- determine that the level of effort required for a proposed project can be met relative to other effort commitments
- recognize that the PI's electronic signature in Quali Research and the signature on submitted proposal documents demonstrates that the PI will accept responsibility for project performance and reports if the award is made
- disclose to the Office of Research Integrity any Conflict of Interest (COI) and pursue review and management of the COI
- disclose international collaborations and sub-recipients information early so that the Office of Sponsored Programs Administration (SPA) can review all pertinent information and/or sources
- discuss domestic sub-recipients with the unit administrative manager to ensure required documents from each proposed sub-recipient are received, such as the statement of work (SOW), budget/budget justification, along with assigned Sub-recipient Commitment Form; other potential problems may arise if the sub-recipients information is not in Quali Research, so communication is very important during the development state.

Award Documentation

The PI should:

- recognize that the PI shares responsibility with the unit's administrative staff for ongoing administrative management of sponsored projects
- review the award terms and conditions to confirm project deliverables and reports as well as any restrictions on expenditures or project changes
- identify significant dates and activities, such as report due dates, timeline for completion of milestones, and requirements for award renewal
- not sign an award or agreement except where PI acknowledgment is required; SPA officers will sign as authorized officials for UMB.

Project Management

The PI should:

- oversee conduct of the project, including work of collaborators and sub-recipients
- ensure that project staff has training and certification required by UMB, by federal and state regulations, and by the sponsor
- seek and maintain approvals for human subjects, animal use, pathogens, select agents, DNA, or other research requiring committee and/or other approvals
- maintain program-related records
- submit all required program reports
- prepare and submit results for presentation and publication
- acknowledge funding sources in publication
- conduct activities in adherence to applicable UMSON guidelines and policies
- report inventions to the Office of Technology Transfer (OTT).

Account Management

The PI's responsibilities are to:

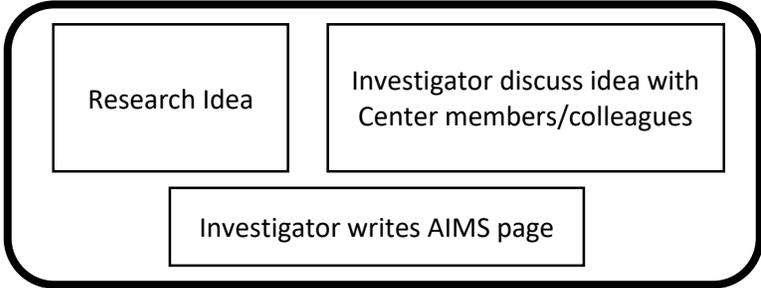
- coordinate with the unit's administrative manager to ensure that personnel and other expenditure records are maintained
- determine that any expenditure charged to an award, whether for personnel, supplies, equipment, travel, or other types of expenses, is allocable to the project as well as allowable and reasonable
- certify effort quarterly, and when required, certify effort of project personnel quarterly
- monitor effort commitments to ensure that the PI and key personnel are meeting the effort commitments agreed to when the award was accepted and update effort distribution as changes become known
- review award expenditures regularly (best practice = monthly) to ensure that expenditures are correct and appropriate
- review and approve sub-recipient agreement requests
- review and approve sub-recipient invoices for payment
- review and approve other project changes, some of which may require sponsor approval (such as a change to the SOW, or significant change in a PI's effort on the project).

When a project expires or is terminated, the PI is responsible to:

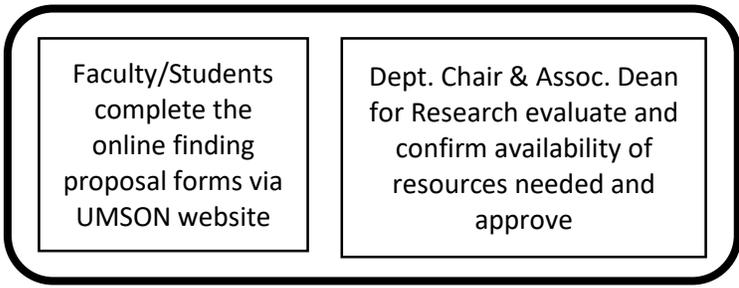
- meet sponsor's deadline(s) for final reports
- submit any required final project report
- submit any required final invention report
- review the final financial report
- close out Institutional Review Board (IRB) and Institutional Animal Care & Use Committee (IACUC) protocols.

OVERVIEW OF APPLICATION PROCESS

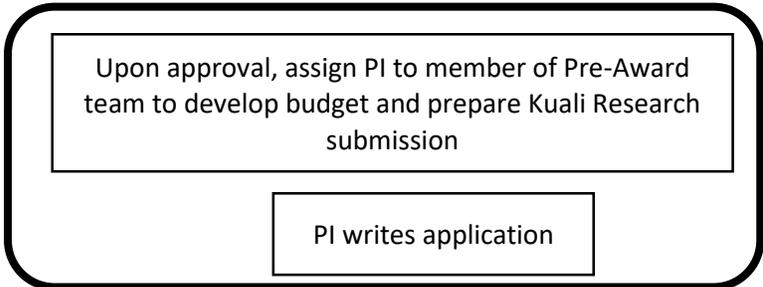
1. IDEAS TO AIMS



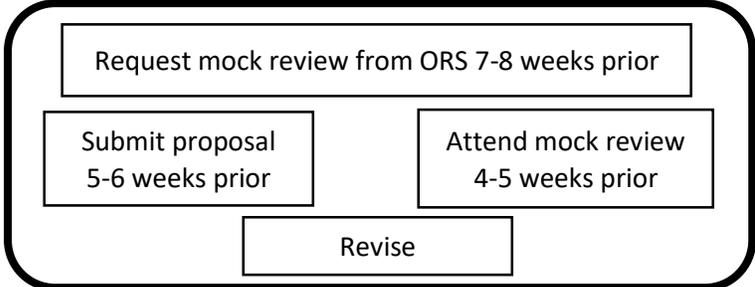
2. APPROVAL PROCESS



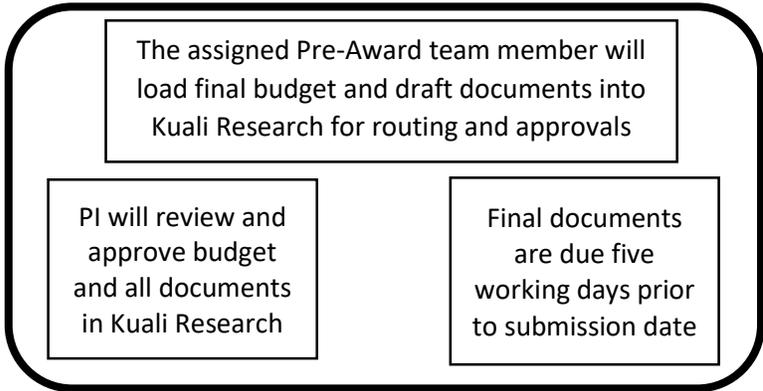
3. DEVELOPING APPLICATION



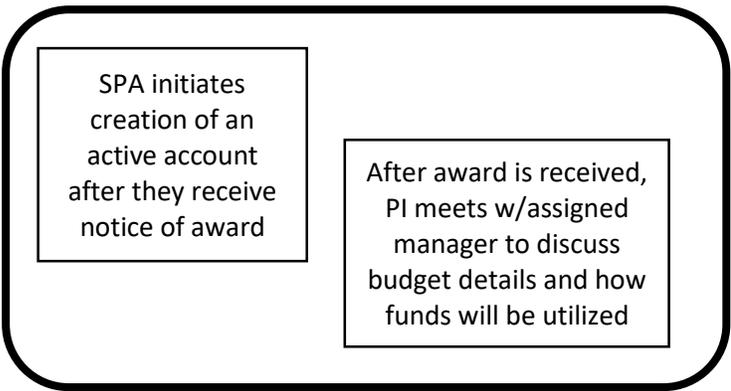
4. MOCK REVIEW PROCESS (OPTIONAL)



5. ROUTING & SUBMISSION



6. POSTAWARD PROCESS



SPA - Sponsored Programs Administration
SPAC - Sponsored Projects Accounting and Compliance
ORS - Office of Research and Scholarship

1. **IDEAS TO AIMS**

The investigator brings his/her research idea to organized research center (ORC) members/colleagues. The investigator writes AIMS page. After feedback and revision, the investigator determines what resources will be needed for the project.

Investigators will begin their application process by presenting their ideas/aims to the leadership and members of the ORCs and/or external colleagues/reviewers as appropriate. After the specific aims are written, they will be reviewed by the ORCs, which will approve or recommend additional revisions prior to submitting to the pre-award division.

A. UMSON Biology and Behavior Across the Lifespan

Leadership: Eun-Shim Nahm and Barbara Resnick

UMSON's **Center for Biology and Behavior Across the Lifespan (BBAL)** promotes the conduct of interdisciplinary research related to the influence of biology and behavior on health and health outcomes across the lifespan. BBAL strives to serve as a center for shared thinking—within UMSON and across the UMB campus—aimed at the development of pioneering research ideas and interventions to promote and sustain health in all people, from infancy to old age. The center provides a core for the pooling of resources and sharing of data across a wide variety of projects related to biological and behavioral outcomes. Its members provide leadership within UMSON to guide research related to biology and behavior across the lifespan.

B. UMSON Center for Health Outcomes Research

Leadership: Carla Storr

UMSON's **Center for Health Outcomes Research (CHOR)** provides a mechanism to support its multidisciplinary membership with mentorship, training, and service to promote discovery focused on improving health outcomes of people and systems of care. The members have strengths in a broad array of health outcomes topics and research methods needed to facilitate knowledge about the complex causal influences that effect health and safety outcomes and patient preferences for treatments. The overarching goal is to build a new generation of scientists to expand knowledge generation on this critical topic. Findings from CHOR members' research are essential to optimize policy and practice.

C. UMB Center to Advance Chronic Pain Research

Leadership: Susan G. Dorsey and Man-Kyo Chung

UMB's **Center to Advance Chronic Pain Research (CACPR)** is a multidisciplinary center comprising nationally and internationally renowned clinical and preclinical translational scientists whose principle research focus is on the physiological, genetic, and psychosocial underpinnings of the development and persistence of debilitating chronic pain conditions. Members of CACPR come from the schools of Nursing, Dentistry, Medicine, Pharmacy, Social Work, and Law. CACPR seeks to promote cutting-edge basic, translational, and clinical biomedical research that will advance our understanding and treatment of chronic pain. The members of CACPR bring together a unique collection of skills to create an exciting research environment.

2. FUNDING APPROVAL PROCESS

A [Pre-Application Form](#)¹ is used to start the application process and to inform your department chair, the associate dean for research, and the assistant dean for research and finance administration that you are planning to submit a grant. The questions are designed to help us help you identify resources you will need to complete your proposal and to make sure that they are available or can be obtained. It is recommended that you submit the form as soon as you know you will be applying for a grant and, depending upon complexity of grant, preferably four weeks in advance of the grant due date. Shorter periods can be considered based upon complexity.

If you need assistance in completing the form, you can reference the [form instructions](#)².

3. DEVELOPING THE APPLICATION (Including Biosketch)

After the investigator receives the necessary approvals (see next page), the assistant dean for research and finance administration in the Office of Administrative Services will assign a staff member to work with the investigator to review the requirements for the specific submission, develop the budget, and set a timeline for submitting the files necessary to complete the application. If during that time period you decide not to submit an application, please notify the assistant dean for research and finance administration as well as your department chair so the staff member can move onto another project.

APPLICATION/NIH SF424 APPLICATION GUIDELINES

<https://grants.nih.gov/grants/how-to-apply-application-guide.html> (Revised 04/01/2021)

BUDGET DEVELOPMENT

Some helpful resources pertaining to budgets are listed below (adapted from the Office of Research and Scholarship [ORS]):

Allowable cost

<https://www.umaryland.edu/spa/budgets-and-expenses/allowable-costs/>

Budget development

<https://www.umaryland.edu/spa/budgets-and-expenses/>

Consultants

<https://www.umaryland.edu/spa/budgets-and-expenses/guidelines-by-budget-category/consultants/>

F &A cost rate/Indirect costs

<https://www.umaryland.edu/spa/budgets-and-expenses/fa-cost-rates/>

Patient care costs

<http://www.umaryland.edu/spa/budgets-and-expenses/guidelines-by-budget-category/research-patient-care-costs/>

¹ <http://www.nursing.umaryland.edu/research/resources/preaward/funding-proposal/>

² http://www.nursing.umaryland.edu/media/son/research/Instructions-for-completing-the-Pre-Award-Form_Jan-2015.pdf

Participant support costs

<http://www.umaryland.edu/spa/budgets-and-expenses/guidelines-by-budget-category/participant-support-costs/>

Salary caps

<https://www.umaryland.edu/spa/budgets-and-expenses/cost-sharing-and-over-salary-cap/salary-caps/>

Travel rates

<http://www.umaryland.edu/financialservices/rates/#d.en.57715>

Vendor vs. subrecipients

<https://www.umaryland.edu/spa/collaborations-and-subrecipients/vendor-or-subrecipient/>

4. MOCK REVIEW PROCESS (Optional)

Mock reviews are recommended for all applications. The goal of the mock review process is to increase the likelihood of a favorable score and funding for all UMSON grant submissions.

POLICY

Proposal mock review is voluntary and can be arranged by contacting the ORS (DL-NRSResearch@umaryland.edu). Proposals should be reviewed no later than six weeks in advance of the application due date. Proposals that are scheduled to be reviewed should be submitted to the ORS one week before the scheduled review.

External reviewers can be recommended by the researcher and paid a small honorarium (currently \$200) for reviewing proposals.

CRITERIA

The following documents are requested to thoroughly review your research proposal:

- Specific Aims
- Research Strategy
- Bibliography and References Budget Justification
- Biosketches for Key Personnel Environment and Resources
- Animals (if applicable)
- Prior Critique (if a resubmission)
- Intro to Application (if a resubmission)
- Abstract

PROCESS

The reviewers will receive the proposal and score it according to NIH or grant-specific criteria. A grant review meeting will be held. The PI and associated investigators will be invited to attend and hear the comments of the reviewers. The PI and associated investigators will then have an opportunity to discuss the committee's comments and obtain suggestions for revisions.

The NIH scoring system is used for mock reviews to encourage reliable scoring of applications.

Summary

- The NIH grant application scoring system uses a 9-point scale.
- A score of 1 indicates an exceptionally strong application with essentially no weaknesses. A score of 9 indicates an application with serious and substantive weaknesses with very few strengths; 5 is considered an average score.
- Ratings are in whole numbers only (no decimal ratings).
- This scale is used by all mock review panel members to provide an overall impact score and for assigned reviewers to score (at least) five individual criteria (e.g., Significance, Investigator(s), Innovation, Approach, Environment).
- For the impact score, strengths and weaknesses across all of the review criteria should be considered.
- The impact score for an application is based on each individual reviewer's assessment using the scored criteria plus additional criteria regarding the protection and inclusion of human subjects; vertebrate animal care and welfare; biohazards; and criteria specific to the application.
- For each criterion rating, the strengths and weaknesses within that review criterion should be considered.
- Reviewers should consider not only the relative number of strengths and weaknesses noted, but also the importance of these strengths and weaknesses to the criteria or to the overall impact when determining a score.
- An application does not need to be strong in all categories to be judged likely to have major impact, e.g., a project that by its nature is not innovative maybe essential to advance a field (e.g., a major strength may outweigh many minor and correctable weaknesses).
- We expect scores of 1 or 9 to be used less frequently than the other scores.

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	1	Exceptional	Exceptionally strong with essentially no weaknesses
	2	Outstanding	Extremely strong with negligible weaknesses
	3	Excellent	Very strong with only some minor weaknesses
Medium	4	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but at least one moderate weakness
	6	Satisfactory	Some strengths but also some moderate weaknesses
Low	7	Fair	Some strengths but with at least one major weakness
	8	Marginal	A few strengths and a few major weaknesses
	9	Poor	Very few strengths and numerous major weaknesses

Additional Information for Scoring Guidance Table

Minor Weakness: an easily addressable weakness that does not substantially lessen impact
Moderate Weakness: a weakness that lessens impact
Major Weakness: a weakness that severely limits impact

CRITIQUE FORM

Research Project Grant Review Critique:

https://grants.nih.gov/grants/policy/review/rev_prep/critiques.htm

5. **ROUTING AND SUBMISSION/KUALI RESEARCH SUBMISSION**

The UMSON ORS wants your grant submission to be successful, so the following guidelines regarding due dates have been established:

At least 10 business days prior to the grant submission date, a draft proposal (with text, not blank pages) including narratives and other attachments should be provided to the staff member assigned to your proposal for upload into KualI Research. The application will be routed to SPA for preliminary review.

NOTE: Proposals requiring external partnerships, including subcontracts, will need longer processing time. You may continue to work on finalizing your proposal.

At least five business days prior to the grant submission due date, PIs are highly encouraged to submit their final documents. Final changes need to be submitted 48 hours prior to the due date to allow for a successful submission. This will also provide time for any error corrections.

Investigators should meet with the assigned staff member to sign attestation two days prior to submission.

Once the sponsor has made you aware of your scores and/or funding, please pass along the information to the associate dean for research and the assistant dean for research and finance administration.

6. **POST-AWARD**

Once SPA receives a notice of award, they initiate creation of an active account in the KualI Research Award Module by linking it to the previously routed proposal.

Sponsored Projects Accounting and Compliance (SPAC) then creates an accounting chart string, also known as a project identification number, that will be used to track expenditures over the life of the award.

The assistant dean for research and finance administration will assign each project to a member of the post-award team in administrative services.

After the award is received, the PIs will meet their assigned manager and discuss the budget awarded and how it will be utilized.

The manager will prepare a shadow budget that will be used to track expenditures for personnel and operating costs.

Funding profiles will be updated on the commitment accounting form for all faculty staff involved on the project. If faculty and staff outside of UMSON are involved, then administrators will be notified of the funding and prepare memos of commitment (MOCs).

At the earliest possible time from award, the manager will submit eSURF requests for any subcontractors and will also confirm if purchase orders are needed for consultants.

By the 15th of each month, the previous month is reconciled in the shadow account against Quantum expenditures, and this is noted next to the month completed in the spreadsheet. An email will be sent to the faculty member letting them know the project is reconciled and if any issues were found. The faculty member may request a meeting to discuss issues and resolutions at anytime.

Using Gant Viewer function, we will monitor SPAC's invoicing and send a reminder email to SPAC if this has not been done. This will be noted in the shadow account.

At the end of the project period, the manager will assist with closing out the finances and other reports required by the sponsor.

LINKS TO UMB PURCHASING GUIDE AND FORMS

Procurement Services Purchasing Guide:

<https://www.umaryland.edu/media/umb/af/procurement/PurchasingGuide.pdf>

Working Fund Policy:

<http://www.umaryland.edu/policies-and-procedures/library/financial-affairs/procedures/financial-services/working-fund.php>

Working Fund Form:

<https://www.umaryland.edu/media/umb/af/fs/wf/Study-Participant-Payment-Working-Fund-Request-Form-Guidelines.pdf>

Payments to Study Participants Policy:

<http://www.umaryland.edu/policies-and-procedures/library/financial-affairs/procedures/financial-services/research-study-participant-payments.php>

Parking and Commuter Services Forms:

<http://www.umaryland.edu/parking/forms/>

EZ Payment Request Form:

<https://www.umaryland.edu/media/umb/af/fs/forms/FSF-101.pdf>

Billing to UMMS Journal Entry Form:
<https://www.umaryland.edu/media/umb/af/fs/forms/FSF-300-quantum.pdf>

Billing from UMMS Journal Entry Form:
<https://www.umaryland.edu/media/umb/af/fs/forms/FSF-301-quantum.pdf>

Approved by UMSON Governance Council, Review: 08/07/2018

Annually/Substantive Changes to Governance Council: 12/2019

Responsible Administrator: Associate Dean for Research, Office of Research and Scholarship

Approved:

A handwritten signature in black ink, reading "Jane Marie Kirschling". The signature is written in a cursive style with a large, sweeping flourish at the end.

Jane Kirschling, PhD, RN, FAAN
The Bill and Joanne Conway Dean of the University of Maryland School of Nursing