**KWAME NKRUMAH UNIVERSITY OF SCIENCE AND TECHNOLOGY – KUMASI. GHANA**

# A PRINCIPAL INVESTIGATOR'S HANDBOOK FOR GRANTS AND RESEARCH

**Office of Grants and Research**

**June 2016**

## ABBREVIATIONS AND ACRONYMS

| | | |
|---|---|---|
| **FOA** | - | Funding Opportunity Announcement |
| **HOD** | - | Head of Department |
| **KNUST** | - | Kwame Nkrumah University of Science and Technology |
| **PI** | - | Principal Investigator |
| **IRB** | - | Institutional Review Board |

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# FOREWORD

# PREFACE

ACKNOWLEDGEMENTS

# CHAPTER ONE
# THE OFFICE OF GRANT AND RESEARCH

## 1.1 Introduction

This Handbook is designed to assist investigators (faculty and staff) in conducting research at the Kwame Nkrumah University of Science and Technology (KNUST) and in complying with research-related regulations. It is also aimed at providing guidance to investigators on how to develop and administer externally funded or sponsored research projects and to inform them, particularly Principal Investigators (PIs) of their roles and responsibilities in research administration and compliance.

It is also to serve as a quick reference to answers for frequently asked questions on research; and to alert researchers to resources available to help them meet their research responsibilities.
This handbook is expected to be an evolving document and may be updated from time to time to reflect changes in best practices as well as funder or institutional policies, procedures and practices.

## 1.2 Mission and vision of OGR/ purpose of the OGR

## 1.3 Description of OGR

## 1.4 Roles and Responsibilities

### 1.4.1 The Office of Grants and Research (OGR)

The Office of Grants and Research (OGR) is the grants and research unit of Kwame Nkrumah University of Science and Technology with the responsibility of overseeing research administration in the University. The OGR was established to provide support to faculty and staff for the management of grants and research projects.  The Office acts as the coordination point for information, guidance and administration of sponsored research projects.

The OGR is made up of the central office and the network of College Research Offices which work together to provide support for researchers and project staff. The Offices perform the following functions with respect to the research and grant process.

Pre-award:

- Help identify funding opportunities and disseminate this information to potential principal investigators and research team members
- Team up with researchers and staff to prepare proposals and budgets
- Help the PI satisfy the funding source's program announcements requirement
- Assist the PI in navigating the internal review and approval process of submitting a proposal for external support.
- Notifies PIs of pertinent University and funding agency policies and procedures.
- Review research proposals prior to submission to conform with institutional policies and sponsor requirements, and make appropriate recommendations
- Ensure timely submission of applications and track the review process

Post Award:

- Review, negotiate, and accept awards and sub-awards that support sponsored research in consultation with the relevant units and stakeholders.
- Review the terms and conditions of each contract or grant to ensure compatibility with university policy.
- Prepare, negotiate, and issue sub-awards required under sponsored research awards at KNUST.
- Review the terms and conditions of awards to ensure compatibility with university policy.
- Serve as a liaison with sponsors for award requirements award management matters.
- Coordinates administration of grants with the PI and the various Colleges
- Ensure the University's interests are protected in grant applications and awards, contractual relationships and reports.
- Provide advice and monitor compliance with policies and procedures, as well as clarify administrative and financial regulations and requirements
- Supports in post-award non-financial administrative transactions as needed
- Facilitate the timely submission of technical and financial reports to funders
- Work with PIs and project teams to solve problems that may arise during grant period
- Assist in responding to sponsor queries and requirements
- Ensure that all research activities comply with sponsor, institutional and national requirements
- Assist PIs in closing out projects

Other:

- Maintain proper records on grants and research activities in the University
- Produce an annual research report for the University
- Create and maintain information on proposals, funders and their funding areas, etc.
- Compile and maintain institutional profiles (data and information) of KNUST for use by researchers
- Develop and update templates and toolkits that can be used by researchers during proposal development
- Organize training in research methodology, proposal writing, grant administration, compliance and other research related areas for staff and students
- Promote team building, research capacity building and research mentoring in the university by supporting the formation of diverse and inter-disciplinary research teams
- Identify externally funded training opportunities for faculty and staff
- Initiate policy development processes for research and grant related issues
- Facilitate research uptake activities and effective dissemination of research outputs
- Provide project management support services for research projects
- Work with existing relevant units in addressing intellectual property and knowledge transfer issues in research
- Administer the KNUST Research Fund
- Perform any other research related function as the University may deem necessary

1.4.2 Vice-Chancellor

The Vice-Chancellor is the chief institutional official responsible for the direction and guidance of the University's research mission and gives oversight and support to all aspects of the research process. His/her responsibilities include the following:

- Ensure appropriate research-related policies are developed and implemented
- Evaluate requests for indirect cost rate reductions
- Approve co-funding if the funds are expected to come for sources
- Oversee acceptance of awards from sponsors
- Delegate operational authority for research related activities to the appropriate University Units. These include the Office of Grants and Research for the administration of grants and research projects and the Finance Office for Financial Management of Grants,

### 1.4.3 Provosts, Deans and Heads of Department

Provosts, Deans and Heads of Departments are responsible for the research and other sponsored activities that are conducted in their specific unit and are accountable for research funds under their control. Their responsibilities include the following:

- Reviewing proposals to ensure that the proposed project is consistent with the research or educational objectives of the College, Faculty and Department
- Reviewing any co-funding or cost sharing commitments made
- Reviewing other commitments made in the proposal including but not limited to space, equipment, other facilities, materials, staff and all other institutional resources
- Assessing the appropriateness of time commitments made by faculty members
- Committing to the funders requirements and project specific institutional requirements
- Reviewing any indirect cost rate reduction or waiver

### 1.4.4 Principal Investigator

The Principal Investigator (PI) assumes the primary leadership role for the proposal development and implementation of a sponsored project. The administration of sponsored projects is a joint effort between the PI and the University. The University has legal and financial responsibility for the project and is accountable to the funder for the performance of the funded activities and the proper use of funds. The PI is therefore responsible to the University and the funder for completion of the project activities; compliance with funder and university policies and procedures; ensuring that the funds are spent in accordance with the budget, terms and conditions of the grant award; and the close out of the project. The PI is hence held accountable for the proper fiscal management and conduct of the project. The PI also has oversight of all other members of the research team and project staff.

### 1.4.5 Other Team Members

A research project can have Co-Investigators, Faculty Contributors and other members of the research team. These persons work together with the PI to conduct the research activities. A project can also have project staff including but not limited to Project Manager, Project Coordinator, Project Administrator, Accountants, Project Assistants, Research Assistants, Statisticians and other experts. These persons perform their specific roles to ensure that the project is successfully completed.

# CHAPTER TWO
# DEVELOPING A PROPOSAL FOR FUNDING

## 2.1 Identifying Funding Opportunities

OGR will identify and keep a catalogue of active funding opportunity announcements on its website as well as disseminate these opportunities to staff via e-mails. The Office will also maintain a list of sources for funding opportunities including webpage addresses and databases for PI information and use. In addition, information about particular funders, including the deadlines, the review processes, allowable costs, past and present funding priorities and agency personnel may also be available.

The PI must determine the suitability of the funding opportunity by reviewing the details of the announcement. Pertinent information to consider are:

- Research or Project Focus
- Eligibility
- Deadline
- Award budget
- Project period
- Funder Requirements

Once a funding opportunity is deemed suitable, a PI can begin the proposal development process.

## 2.2 Types of Proposals

### 2.2.1 Solicited Proposals

A proposal is solicited when it is submitted in response to a specific solicitation issued by a funding agency. The call can be a Funding Opportunity Announcements (FOA), Request for Proposals (RFP), Call for Proposals or Request for Quotations (RFQ). Funders are usually specific in their requirements regarding scientific area or technical content, award budget, deadline and award terms and conditions.

### 2.2.2 Unsolicited Proposals

This type of proposal is submitted to a sponsor that has not issued a specific solicitation but is believed by the investigator to have an interest in the subject. Some funding agencies are open to receiving unsolicited proposals while others are not.

### 2.2.3 Pre-proposals

A pre-proposal is requested when a sponsor wishes to minimize an applicant's effort in preparing a full proposal and the funders efforts in reviewing large numbers of proposals**.** It may be required for pre-selection purposes, if the funder will be using a two-stage process. Pre-proposals are usually in the form of a letter of intent, a concept note or, expression of interest, etc. After the pre-proposal is reviewed, the sponsor notifies the investigator if a full proposal is warranted.

Some funder require the submission of a pre-proposal document such as a Letter of Intent for the purposes of estimating the number of proposals to be expected.. Funders will specify if such a pre-proposal document is mandatory. In either case, the funder will usually specify the required content for the documents. If not, PIs should contact the OGR for support.

### 2.2.4 Non-Competing Continuation or Renewal Proposals

This is a proposal for continued support for a project for which the sponsor has already provided funding for an initial period. This is usually a non-competitive process and the funder provides specific information required for such a proposal. Continued support is usually contingent on satisfactory work progress and the availability of funds.

### 2.2.5 Competing Renewal Proposals

These proposals are requests for continued support for an existing project for which the sponsor has already provided funding for an initial period. This can be in the form of an open competition or a limited competition (for a pre-determined group of eligible applicants). A funding opportunity announcement is usually made for these proposals.

### 2.3 Proposal Development Process

PIs are expected to write proposals which present their research ideas for funding. The OGR will provide assistance with the process especially with the administrative and budgetary components of the proposal.

The format for a proposal is established by the funding agency. Most funders have policies and procedures for submission of proposals and may require the use of specific application forms or electronic web-based systems. Other funders may have less stringent format requirements. In any case, PIs should obtain the most recent version of the sponsor's application guidelines and should follow the required proposal format. They may also consult the OGR for guidance where necessary. It is important to write a clear and thoughtful Research Plan (the core of the proposal). Reviewers are likely to use it as a basis for judging the clarity of reasoning and the skill that researchers bring to projects. This is the PIs opportunity to show their expertise and scholarship in their field, their knowledge of the relevant literature and technology, and how they will bring this to bear in their research. PIs are expected to provide details that demonstrate familiarity with related research and methodology and fit this into their proposal. PIs need to take time to develop their strategy and set priorities. The reviewer should be convinced that their proposal is an advancement on what has previously been accomplished, and can solve problems.

## 2.3 The Pre-Award Stage (Proposal Development Process)

The following steps are outlined as guiding steps in obtaining funding.

**Identify Funding Sources and Announcements**

**Identify key application details from announcement (**i.e. research/project focus, eligibility, budget amount, deadline, etc.

**Identify and engage proposal team members, partners, collaborators, etc.**

**Submit Pre-proposal document where applicable** (Letter of Intent, etc.)

If unsuccessful identify Comments indicated

**Develop proposal**
- Review funding announcement details
- Research/project concept and plan
- Administrative components
- Budget

**Route Proposal for review**

**Submit proposal through OGR or directly to funder**

If not awarded

**Improve proposal for future submission**
- Incorporate reviewer comments if available
- Submit to another funding agency or same funding agency if opportunity exists

If awarded

**Congratulations**

## 2.4 Suggested Proposal Content

This suggested format for a proposal is a general overview and is not in any way comprehensive or exhaustive. It is to serve as guidance only. Please note that application forms and proposal formats specified by the funder ALWAYS takes precedence over this for every proposal.

a. Title Page / Cover Page
b. Table of Contents
c. Abstract
d. Research Plan
e. Facilities and Resources
f. Consortium/Contractual Arrangements (where applicable)
g. Biographical Sketches
h. Literature References (Bibliography)
i. Budget and Justification
j. Current Support (when requested)
k. Pending Applications (when requested)

### *Cover Page*

This page is for providing key information on the proposal including name and contact details of PI, project title, project period, amount requested for, etc.

Institutional information

### *Table of Contents*

Very brief proposals with few sections ordinarily do not need a table of contents; the guiding consideration in this is the reader's convenience. Long and detailed proposals may require, in addition to a table of contents, a list of illustrations (or figures) and a list of tables. If all of these are included, they should follow the order mentioned, and each should be numbered with lower-case Roman numerals. The table of contents should list all major parts and divisions (including the abstract, even though it precedes the table of contents).

### *Abstract*

(Write this last since it is a summary outlining the scope of the entire proposal)

A paragraph summarizing your topic of research, who or what will be the object of data collection, how the data will be collected, how it will be analysed, and what results you expect (possible outcomes).

***Research Plan***

PIs are expected to present concise project description. The project description should give reviewers a firm grasp of what the project is, how it will be carried out, and what it will accomplish. Lengthy descriptions tend to defeat their purpose. In writing project descriptions, applicants should discuss each of the following aspects of their projects with an experienced colleague:

i. **Introduction:** Your research project from the broader context and focus in on the problem you are addressing. The introduction should cover the key elements of your proposal.
ii. **Background**
iii. **Problem Statement**: - Explain the problem and its significance for the field
   - State the generality of the problem
iv. **Purpose of the study:** Explain what is to be accomplished by the project
v. **literature review / related research:**
   - Show the gap in knowledge that your research will address
   - Explain how the research will contribute to previous theory or establish new theory.
   - Select studies that provide a foundation for the project.
   - Discuss studies in sufficient detail to aid the understanding of a non-specialist
   - Describe contributions to the background of the study and show how this project will further them
   - Demonstrate a mastery of the field's literature
vi. **Specific Aims And Objectives**
   - List specific aims and objectives which appear concrete and obtainable; they are criteria for judging the project.
   - Hypotheses should be stated where there is a basis for prediction.
   - If research is exploratory, questions are appropriate.
vii. **Procedure/ Methodology**
   - Specific approach to objectives, what is to be done and why.
   - Activities

- Outline of broad design of research/experiments to be undertaken, data to be gathered, statistical and other analyses to be made
- Population and sample. Describe the group from which the sample will be drawn, the method of sampling, and the rationale for the sampling method.
- Data and instrumentation
- Analysis

Unclear plans, unfamiliarity with previous or other current work, or a lack of methodology are the most frequent criticisms of applications by reviewers and panellists.

viii. **Others :**

**Significance and Relevance**

- Educational significance; importance of problem
- Will the project contribute something of value to public welfare?

Explain how the completed project will contribute to humanistic knowledge and describe the value of the contribution. Where relevant, explain how the project will contribute to an understanding or alleviation/solution of problems of national/regional concern. Avoid overstatement here as it can distort the possible real validity of the application

**Innovation**

- Novel outputs or innovations that will be realized
- Novel or innovative concepts, approaches or practices

**Plan of Work**

State what is to be done, where, when, how, and by whom. If the requested grant period covers only part of the entire project, show clearly what is to be accomplished within the requested grant period. The presentation of clearly defined phases for completion of a project strengthens the research aspect of the project description. Like the budget, the proposed plan of work is an acid test of an application and can alone elevate it from the level of a good idea to the status of a sound and well-designed project.

**Timeline/ Implementation Schedule**

Indicate the time for completing the activities. Provide a detailed timeline for the expected outputs and/or outcomes.

**Expected Result**

Article, monograph, book, conference or symposium, policy brief, other dissemination tools, improved practice, etc.

**Personnel**

- Professional competence and experience of PI and other investigators especially in relation to the proposed research area

***Facilities and Resources***

- Overview of KNUST
- Type and adequacy of facilities, equipment and populations available to pursue the study
- Specific resources that will be used by project

In general, this section details the resources available to the proposed project and, if possible, shows why the sponsor should select this University and this investigator (together with any collaborators) for this particular research. Some relevant points may be the institution's demonstrated competence in the pertinent research area, its abundance of experts in related areas that may indirectly benefit the project, its supportive services that will directly benefit the project, and its unique or unusual research facilities or instruments available to the project.

***Consortium/Contractual Arrangements (where applicable)***

If the proposal is being submitted in collaboration with other partner institutions, a statement describing the nature and justification for the collaboration

***Biographical Sketches/ CVs (for all key personnel who will work on the research)***

- Name
- Official title
- Education (bachelor, postgraduate, postdoctoral with institution, degree, year, and field at each level)
- Work experience (start with present position, list all employment)

- Research and/or professional experience (list relevant research projects and role)
- Honours and achievements
- Major research interest
- Role in the proposed project
- Professional affiliations
- Personal Publications

***Literature References (Bibliography)***

***Budget and Justification***

***Current Support (when requested)***

***Pending Applications (when requested)***

**2.5 Ethical Consideration**

It is important to indicate that issues regarding ethical conduct of research have been considered and to outline the necessary steps the tam will be taking to ensure adherence with ethical requirements

**2.6 Progress Report**

A progress report is included if the proposal is a renewal, continuation, or supplemental proposal.

**2.7 Project Management Plan**

This section describes the management plan for the project including the personnel involved and how they will relate to each other, as well as the conflict resolution measures that will be taken, should there be any. It also outlines the various management activities

### 2.8 References

Make sure these follow a recognised format, and do so consistently.

### 2.9 Proposal Budget and Justification

The PIs play a critical role in the Budgeting Process. PIs are expected to work with Research Administrators and Accountants to develop a budget. The budget should reflect the methodology described in the proposal. Reviewers should be able to determine if sufficient funds are being requested to successfully complete the project, and that those requests are reasonable given the scope of work. Accuracy and detail are essential in budgeting for any proposal. PIs should follow a sponsor's guidelines exactly and provide information in the format specified in the proposal guidelines. Budgeting costs can be grouped into Direct and Indirect costs. Sponsors would normally specify how budgets should be presented, what costs are allowable and the types of costs that could be budgeted for including personnel, non-personnel, administrative, and overhead expenses. Justifications for requested expenditures should be included.

#### 2.9.1 Full Cost Budgeting

KNUST practices full cost budgeting. PIs are expected to develop a budget that captures the complete cost of all activities of the project. Even if KNUST will make an institutional investment into the project in-kind or in cash, it is recommended that PIs develop a full cost budget, and then allocate the appropriate cost to the sponsor.

#### 2.9.2 Cost Principles

The University requires that PIs adhere to the following cost principles during budgeting and actual expenditure:

Reasonable – Prudent price to pay for an item or activity

Allocable – There is a direct relationship between the expenditure and the project

Allowable – The cost adheres to the sponsor's terms and conditions

Consistently Treated – Costs are treated the same in like circumstances at the institutional level

Verifiable – The basis for the estimation and expenditure can be verified with the appropriate documentation

### 2.9.3 Direct costs

The following direct cost categories are typically used in most proposals.

Personnel: Salaries and Wages

PIs are expected to determine the names and positions of all key and support personnel. The "level of effort" or other measure of time commitment to the program for each individual needs to be determined. Generally, salary support for administrative and clerical staff cannot be requested in a grant budget, unless the project's requirement for these personnel is much greater than the level of routine services the academic/administrative department provides.

Equipment

PIs are expected to list each item of equipment that will be needed on the project and provide an adequate justification of the need for each requested item. PIs should show equipment items, including the cost (obtained from the most recent catalog or from price quotations), and the costs of directly related expendable supplies, computer usage, publications, and any other miscellaneous expenses.

Travel

Projects may involve travel. In such circumstance, PIs are expected to describe the purpose and destination, when known, for the trip(s) and the individual(s) for whom travel funds are being requested. Airfare cost, ground transportation and per diem can be budgeted for. The process of approval and documentation must be adhered to, as specified in KNUST and funder's regulations.

Consultancies and Professional Services

The PI is expected to indicate the name, when known, of each consultant and itemize costs including number of days, daily rate of pay, travel, and other related costs. A Letter of Intent to participate in the project should be appended to the proposal. Please note that some funding agencies have limits on daily fees.

Cost Sharing

If requested by the funder, the PI is expected to provide cost-sharing information. If cost-share is in kind, the PI must specifically indicate so, the details and the monetary value. If the cost-share is in cash, this must also be indicated. PIs are expected to get the appropriate approvals and signatures for cost-share commitments e.g. HOD, Dean or Provost, or Vice Chancellor. In the case of non-KNUST cost-shared items, a letter from the source suffices.

Participant Support Costs

The PI is expected to determine allowable participant support costs for items such as stipends or subsistence allowances, travel allowances and registration fees paid to or on behalf of participants or trainees (but not employees) in connection with clinical trials, treatment costs, surveys, meetings, conferences, symposia or training projects. PIs are expected to adhere to funder requirements on this.

Publication Costs

The PI is expected to list the number of publications to be made and cost each publication.

Other Direct Costs

The PI is expected to itemize other direct costs by category, such as publications out of the research, graphic services, photography, maintenance and service agreements, computer charges, rentals and leases, service centres, tuition/fees, animal costs, and IRB fees.

### 2.9.4 Indirect Costs

Indirect costs are costs that the university incurs in the process of providing services and facilities for projects but that cannot be charged either wholly or pro-rated, to a particular project as a direct cost. These are also termed as “facilities and administrative” or “overhead” costs. PIs must budget for all allocable requirements as direct costs. PIs are expected to use the maximum IDC rate allowed by the funder. If not specified by the funder, the PI must use the KNUST institutional IDC rate (Refer to Indirect Cost Rate Policy).

The PI should be able to differentiate between direct and indirect costs. If a PI is considering any of the expenses as a direct charge to an award, s/he must provide an adequate justification in the proposal.

### 2.10 Other Requirements

Funders will sometimes require information on other research support being received by investigators or other pending applications, either at the time of proposal submission or at the time of award, if the proposal is successful. The following details should be provided is such a requirement is indicated.

a. Current Support (A list of all other current research support)
    - ✓ Funding agency and grant/contract number
    - ✓ Title of project
    - ✓ Total award
    - ✓ Period of support
    - ✓ Per cent of time spent on project

b. Pending Applications (If the PI has no other applications pending, this should be stated. If this proposal is being submitted to other agencies, state this fact.)
    - ✓ Agency
    - ✓ Title of project
    - ✓ Total amount
    - ✓ Period of support

### 2.11 Proposal Commitments

Principal investigators are to note that when a proposal is submitted to an external sponsor, a wide range of infrastructure, technical, and financial commitments are made and/or implied. In the event an award is made, it becomes critical that the promises made are delivered. These may include:

#### 2.11.1 Direct Commitments

a. Time and effort

   The Project may have the following personnel in place
    - ❖ Principal Investigator (PI)
    - ❖ Other Key Personnel
    - ❖ Postdocs
    - ❖ Graduate Students
    - ❖ Undergraduate Students

b. Facilities

The Project may have the following facilities in place

- ❖ Laboratory space
- ❖ Office space
- ❖ Classroom space

c. Equipment

The Project may have the following facilities in place

- ❖ Computer Use
- ❖ Scientific Equipment Use
- ❖ Machine or Other Shop Use

### 2.11.2 Peripheral Commitments

The Project may need the services of other staff/resources of the University

- ❖ Departmental Staff and Other Resources
- ❖ Research Administrators
- ❖ Research Accountants
- ❖ Any Office/Department services used in connection with the award

## 2.12 Best Practices

**To ensure adherence to best practices, the PIs are expected to ensure to:**

a. Read the proposals of other investigators in your field.

b. Look at the strategy of the proposals

c. Start modestly and concentrate on proposals that are within their capability and that have realistic budgets

d. Re-read the proposal through the eyes of the reviewer and rework the proposal until it is absolutely clear.

e. Seek advice from senior colleagues who have grant experience. Ask them to read and criticize your proposal. See if they understand what you are going to do.

f. Make sure that you follow agency-specific guidelines when preparing your proposal

**To Avoid Potential Mistakes PIs are expected to:**

a. Send proposals through normal channels with assistance from the Office of Grants and Research.

b. Use the funding agency or university format which the Office of Grants and Research provides.
c. Be completely honest
d. Do not include unrequested materials, massive documentation, or excessive details. These can distract the reviewer from the point of your proposal.
e. Present a realistic budget. Budget the appropriate personnel for the expertise needed. The sophistication of the PI comes through in the budget and justification of the budget.
f. If site visits by funding agency representatives occur, keep them business like; they are not social occasions.
g. If your proposal is rejected, ask the funding agency for the reviewers' comments on your proposal. (These are not available until the funding decision has been made.) These comments are most useful when you rewrite your proposal and submit again.
h. If your proposal is funded, the reviewers' comments are still valuable; you can take their opinions into consideration when you submit your next proposal.

## 2.13 Institutional Proposal Review Process

Institutional reviews of proposals prior to submission are necessary and beneficial both to the Principal Investigator and the institution. Proposal review processes serve the following purposes:

- Valuable inputs to the proposals are made by reviewing units
- Institutional endorsement of the proposal
- Enables updated institutional data on proposals and success rates
- Facilitates good institutional research information and metrics
- Avoidance of disqualification due to multiple proposals from same institution in limited submission calls
- University's interests are protected

Proposals for review must be submitted together with all relevant documents at least **one week** before the deadline for final submission. The proposal and its accompanying documents should be sent to **ogr@knust.edu.gh** and the office notified.

## 2.14 Review Process

During the review process, the following are examples of considerations made:

- Proposals are reviewed for compliance with University and sponsor requirements

- PIs and/or departments are alerted to potential problems with the funding source (i.e., onerous reporting requirements etc.)
- Information provided related to any required assuranare checked for accuracy and completeness (i.e., use of human subjects or animals, lobbying, etc.)
- Approval is obtained for any unusual sponsor requirements, such as waiver of indirect costs or restrictions on dissemination of results
- Cost-share commitments and/or matching funds are verified and the necessary approvals sought.

## 2.15 Proposal Submission

Before the final submission of the proposal, PIs are responsible for the following:

- Ensuring the accuracy of the information provided in the proposal, including the scientific and intellectual direction of the project
- Maintaining compliance with all University and sponsor requirements for the design and scheduling of the proposed project
- Obtaining agreement to participate from all proposed collaborators and consultants
- Completing materials in a timely fashion to allow for review, processing, and transmittal to the sponsor by the deadline
- Verify documentation for subcontractors and/or consultants
- Review proposal routing form for appropriate signatures and PI compliance with relevant special reviews
- Verify indirect cost rates
- Review proposed budgets

### 2.15.1 Mail or Courier Submission

The PI should note the number of copies of the proposal required by the sponsor and the deadline for submission of proposals, if it's a hard copy submission. One complete copy of the proposal should be submitted to OGR for the files. The PI is responsible for ensuring that the correct number of copies of the proposal is delivered to the sponsor.

### 2.15.2 Electronic Submission of Proposals

View of the fact that many sponsors require or allow electronic submission of proposals. PIs should take note of all e-mail addresses where proposals should be sent to.

### 2.15.3 Deadlines

A receipt deadline is the date by which the sponsor must receive the proposal. In most cases, a proposal will not be considered if it misses the agency's deadline. For hard copy submissions, PIs are to ensure that their proposals are received by the sponsor by the deadline. Some funders use postmark deadlines (means that the proposal must be postmarked by the deadline date irrespective of when the sponsor receives it). As a precaution, it is recommended that proposals should always be received by sponsors by the deadline at all times. Electronic proposal submissions have specific requirements concerning deadlines which should be consulted. Pay attention to time zone differences and the deadline time zone specified by the sponsor.

Electronic submissions are usually rife with several challenges (including submission system failure, bounced proposals as a result of errors, power outages and internet challenges). It is also advisable for PIs to familiarize themselves with the application forms and requirements in the submission systems early on in the proposal development process. **It is highly recommended that PIs ensure their proposals are submitted a day or two before the deadline to ensure any errors or challenges can be addressed without missing the deadline.** If you have any questions about the deadline requirements for your application, you can contact OGR for assistance.

# CHAPTER THREE
# POST-AWARD STAGE

****Post-Award flow chart**

Receive Notification of Award (NOA)

Review and Acceptance of NOA (in consultation with OGR)

Project Set up
- Register in ReMIS
- Accounting set up with appropriate Finance Office

Implementation and Monitoring
- Execution of project activities
- Periodic reporting
- Monitoring compliance
- Dissemination

Final Reporting

Award Close Out
- Technical
- Financial
- Administrative
- Inventory
- Record Retention

### 3.1 Award Acceptance (Review, Negotiate, Accept)

All research and training grant awards must be submitted to the Office of Grants and Research for review of terms and conditions to ensure acceptability and compatibility with university policy. The OGR works in consultation with the Legal and Welfare Office in reviewing awards to ensure that the interests of the University and its staff are protected.

### 3.2 Types of Award Instruments

*Grants:* Grants are agreements with external sponsors with entities where the sponsors provide resources to an eligible entity to carry out an approved project or activity. They are usually less restrictive than contracts

*Cost-reimbursable contracts:* For cost-reimbursable contracts, a sponsor pays all of the allowable expenses up to the stated amount for the research. If any of the committed funds remain unspent, the university is not entitled to them.

*Fixed-price Contracts:* Sponsors agree to pay the stated amount for the product (usually a technical report) for fixed price contracts. If there are funds remaining at the end of the project, the university is entitled to keep those funds. If there are no more funds available and the university has not yet completed the work, it is the responsibility of the university to complete the project. Therefore, the unit and PI should take this into consideration before accepting a fixed-price contract.

*Cooperative Agreements:* Cooperative agreements are similar to grants. The main difference between a Grant and a Cooperative Agreement is that the grantor and the other parties will be substantially involved with the grantee during performance of the activity. They are partners as opposed to patrons of the grantee.

### 3.3 Project Set Up

Once negotiations have been concluded and an agreement has been signed or unilaterally forwarded to Office of Grants and Research, PIs are expected to register their grant in the University's Research Management Information System (ReMIS). A unique code is generated for the grant. The PI then submits the evidence of registration to the appropriate Finance Office to enable the establishment of an internal account for the project.

### 3.4 Project Implementation and Monitoring

Once the registration and setting of accounts are completed, PI and their teams can then carry on with the activities of the project. During implementation, the PI is expected to monitor the project's compliance to sponsor and institutional requirements such as ethical conduct of research, approvals for the use of human or animal subjects, conflict of interest, and expenditure allowability as well as the terms and conditions stipulated by the sponsor.

### 3.5 Budget Revisions

This happens when a PI revises the budget of the award which has already been approved by the sponsor. To effectively manage any award is to stay within the originally agreed budget parameters. It is not uncommon to need budget revisions. The PI cannot however simply change the budget as each sponsor has specific policies when it comes to budget modifications. This is typically outlined in the award and/or the terms and conditions and/or the sponsor's policies, and must be adhered to in the management of a project. If the PI needs to modify the budget, the PI must work with the Office of Grants and Research and the sponsor to ensure that such modifications follow due process.

### 3.6 Change in Scope of Work or Amount of PI Effort

A significant change in the scope of the work or amount of effort spent on a project by the PI usually requires prior approval by the funding agency. If PIs become aware that they will devote substantially less effort to the work than anticipated in the approved proposal, they have to advise sponsor's program officer (or the primary grantee in the case of a sub award). The Office of Grants and Research will assist PIs in this process and therefore should be the first point of call. If it is determined that the reduction of effort might impair a particular project, the sponsor may accept the PI's proposal, request that the university nominate an acceptable replacement PI initiate termination procedures, or negotiate an appropriate modification to the grant.

In addition, each project budget or award designates levels of effort a PI and other project staff will devote to a project. Changes to effort generally have a ripple effect on the budget as well as the project deliverables, and can significantly affect the terms of the research agreement. If any changes are expected to the effort, the PI must contact the Office of Grants and Research to assist with the process and ensure sponsor and institutional requirements are adhered to.

### 3.7 Change in PI

If a PI becomes aware that they will no longer be able to fulfil the PI role due to one reason or the other, they have to contact the Office of Grants and Research immediately. The institution has to initiate discussions with the sponsor (or the primary grantee in the case of a subaward). The sponsor may request that the university nominate an acceptable replacement PI or initiate termination procedures, or negotiate an appropriate modification to the grant.

All requests to change the PI must have appropriate University approval through the Office of Grants and Research as well as that of the sponsor. Reasons for the change together with curriculum vitae for the proposed new PI should accompany the request.

### 3.8 Inventions and Patents

The following should be adhered to by all parties in respect of Inventions and Patents:

a. All University Employees and all other individuals, paid or not, who are working on extramurally-funded research projects, or who are using university facilities, including unsalaried visitors, must sign the KNUST patent acknowledgement form. The PI is responsible for ensuring that this has been done by everyone who participates in the research project.
b. PIs should direct their research so that a potentially evolving patent occurs under a single funding agency. If development or use in research overlaps from one agency to another, conflicting patent rights could impede the development of the device, product, or process. Contact the Office of Management of Intellectual Property if such a problem is possible in your research. Explain reasoning.
c. If a device, product, or process evolves from any research project, a complete written disclosure must be made promptly and directly by the inventor to the Director of OGR of KNUST. Do this prior to publication or disclosure outside of the University. The form may be obtained from the Office of Management of Intellectual Property. (Refer to **Intellectual Property Policy** of KNUST for details).

### 3.9 Reporting

**Periodic Reports:** The PI is expected to provide financial and technical progress reports as often as required by sponsors on a fixed schedule throughout the lifetime of an award. These reports provide the sponsor with assurance that activities are moving forward according to the terms of the agreement. Some sponsors require externally audited annual project accounts as part of the periodic reporting. Reporting requirements are usually specified by the sponsor either at the time of award and/or during implementation period. The PI is responsible for making sure all progress reports are submitted to the sponsor on time. Failure to provide the required reports can result in funding delays in multi-year awards, early termination of the award by the sponsor, or leading to the PI's inability to apply for any future awards.

**Final Reporting:** Similar to the interim reporting, sponsors will specify the requirements for final reporting. Some of the components usually required include technical report, externally audited financial report, publications and inventions and technology transfers. In some situations, the project or the sponsor will require the dissemination of project findings to other audiences in addition to the sponsor. PIs should confirm with Program Officers at the funding agency to ensure that all requirements for final reporting are met.

### 3.10 Procurement of supplies, equipment, services

### 3.11 No-Cost Extensions

The PI may need to request for a no-cost extension to allow for time to finish the work. Some sponsors allow for the request of a no-cost extension. A no-cost extension (NCE) is the extension of the project period beyond the original end date without additional funding. It is important to clarify the sponsor's policy on no-cost extensions (if allowable) and follow the required processes. Such request may include a justification and a projected budget that provides a spending plan for any unused funds. The OGR should coordinate and this should be done at a minimum of 90 days in advance of the award's termination date.

### 3.12 Award Close Out

Every award specifies an end date; and PIs should plan for the end of the grant. As the end date approaches, the PI will need to consider whether they can complete all the required activities of the project by the specified end date or whether they will need a no-cost extension. When an NCE is granted, all requirements for award close out will be completed at the new end date.

Sponsors and host institutions both have their close out requirements and PIs are required to comply with both. Once the award period officially ends, each sponsor establishes its own deadlines for the submission of final financial and technical reports, as well as final invoices. The PI should be aware of and ready to meet these deadlines. Typically, the close-out process is smooth, provided that all reports and all expenses have been judiciously accounted for. These will normally include the submission and approval of the technical and financial reports, processes to close out the internal grant account, administrative processes such as human resource issues, inventory (how project assets are handled), inventions and retention of project records. All these processes should be completed per sponsor and institutional requirements.

Once all close-out processes are completed, the project is deemed 'closed out' and no longer active. All records on the grant are however kept as the sponsor or the university can make a future information request regarding the grant.

### 3.13 Sub-Awards

When ta collaborator engages directly in the development of the proposal and/or performance of the specific aims of the project, that collaborator is given a sub-award of the primary grant. KNUST can either give or receive a sub-award from another institution. KNUST and the awarding institution or the sub-award institution should mutually agree on how the substantive work will be performed and how it will be measured. In the case where KNUST is the prime applicant/grantee, the following processes are followed:

#### 3.13.1 Proposal Stage

The PI will determine the potential need for a sunward at the proposal stage. Most funding agencies require written approval before a sub-award is issued. Depending on the proposal guidelines from the sponsor, other information may also be required, such as letter of intent, biographical sketches, current and pending other support, and available facilities information.
The following information is normally requested from the potential sub-recipient.

a. The scope of work to be completed by the sub-recipient
a. A budget that meets the requirements of the sponsor and KNUST

b. A letter of intent with an authorized signature indicating the potential subcontract institution's commitment to perform the proposed scope of work, assuring the accuracy and reasonableness of the budget, and agreeing to enter into a subcontract if the proposal is funded
c. All required representations, certifications and assurances (e.g. human subject assurance).

The budget consists of a categorical breakdown of sub-recipient costs, which could include both direct and indirect costs, if allowed by the funding agency. If indirect costs are included in the potential sub-recipient budget, a copy of their most current Indirect Cost Rate Agreement must be provided to the KNUST's Office of Grants and Research for verification of the rate used in the budget. The budget should also show a categorical breakdown of sub-recipient cost sharing, if cost sharing is required. The scope of work outlines the work to be accomplished by the sub-recipient.. If there is a revision of the proposal or budget after the review, the KNUST PI would contact the subward PI for the required revisions. All revised documentation from the sub-recipient would once again require an institutional/organizational authorized representative signature

### 3.13.2 Issuing the Sub-Award

After the awarding agency has approved the proposal, the following will apply:

a. The PI initiates the issuance of a subcontract by contacting the Office of Grants and Research with a copy of the award and the sub-recipient's budget and statement of work.
b. OGR, in consultation with the Legal and Welfare Office, will prepare the subcontract in accordance with sponsor guidelines and regulations as well as KNUST policies and procedures; and ensure that the sub-recipient has supplied all required information.
c. The period for the sub-award agreement should not be longer than the period for the prime award. The agreement will include the scope of work, budget and reporting requirements.
d. The OGR will send the Sub-Award Agreement to the sub-recipient for signature by an authorized institutional official.
e. Sub-recipients are requested to return the signed subcontract, along with any supporting documents as needed (e.g., audit certification, Indirect Cost Rate Agreement, etc.), to OGR for counter signature by the University.

f. When this process is completed, it means the sub-award has been fully executed. The fully executed sub-award agreement is then sent to the sub-award institution.

**Amendments**

During the period of a sub-award, it may become necessary to amend the terms of the agreement to incorporate any changes. This could be as a result of any of the following changes.

- Change of scope of work
- Increase or decrease in funding
- Revision of the subaward period of performance
- Modification or addition to the terms and conditions
- PI change for prime awardee or subrecipient

A request for sub-award amendment will need to be initiated by the PI to start the process. The OGR processes amendments to all sub-awards.

**Process for Advance Payments and Cost Reimbursement**

a. Once the sub-award agreement is fully executed, the subrecipient can either request for an advance payment and/or cost reimbursements. If an advance payment is required, a justification for the need of an advance should be provided. Subsequently, a report on expenditure and an invoice is presented to process additional payments. For cost reimbursements, the subrecipient presents invoices in arrears for payment in accordance with the sub-award agreement.

**Close Out of Sub-Award**

Once a sub-award agreement has ended, close out documentation will need to be sent to the subrecipient to ensure all deliverables have been successfully completed and the final invoice has been paid. This process will be completed and signed by the subrecipient certifying that all deliverables have been completed. KNUST will also have to ensure that all payments have been made.

**KNUST as Sub recipient**

In the case where KNUST is the sub recipient, the prime award institution will issue the sub-award agreement, ensure that all information from KNUST has been received and KNUST receives a fully executed agreement. The prime award institution also monitors KNUST's performance and processes payments in accordance with the sub-award agreement.

## GLOSSARY

**Principal Investigator (PI)**

PI refers to the person who assumes the primary responsibility for the conduct of sponsored projects. He ensures that the project is conducted by those with the requisite skills and training on grants management.

**Direct Costs**

Direct costs can be defined **"**costs that can be identified specifically with a particular sponsored project, or that can be directly assigned to activities that will enhance the implementation of a project."

**Indirect Costs**

Indirect Costs are defined as those costs that are incurred for common or joint objectives and therefore cannot be identified readily and specifically with a particular sponsored project, instructional activity, or any other institutional activity.

**Sub-Award**

Sub-Award as an agreement that is written under the authority of, and consistent with, the terms and conditions of a prime award, and authorizes a portion of the substantive effort to be performed by another organization.

**Reference**

University of Utah Handbook for Research & Sponsored Activity

University of Illinois Library website

University of California, Santa Cruz PI Handbook

University of California, Irvine