Innovation Impact Grant (IIG)
Guidelines & Instructions

Deadline for Application

NOON, Wednesday, October 14, 2020

Notification of decisions will be made in March 2021.

IMPORTANT: IIG proposals are submitted using an online application system.

If you have applied for a grant using NCBiotech's online funding portal previously *(for any NCBiotech funding program), you do not need to register again.*

PIs applying for the first time must register for an account at least 5 business days before submission of the proposal. See Step 6, page 8 for details.

Read these IIG Program Guidelines & Instructions thoroughly prior to submitting an application. If you have any questions about the program, use the contact information at the end of this document.

Purpose

The goal of the Innovation Impact Grant (IIG)* program is to provide funding for research infrastructure necessary for innovation in North Carolina's life sciences ecosystem. Grant funds are used to support the purchase of research equipment or instrumentation for core facilities at North Carolina academic or nonprofit research institutions. Please see the FAQs on the NCBiotech website (*www.ncbiotech.org/grant-faq*) for the definition of a core facility.

Applicants must demonstrate how the NCBiotech investment will enable research and development, accelerate innovation, and create impact in North Carolina.

NCBiotech IIG Impact criteria:

- The investment will fill a gap in the NC life ecosystem by enabling scientific advances not previously possible.
- The core facility and the requested equipment will serve a broad community of NC life sciences researchers, within and outside of the applicant institution.
- The investment falls within a larger initiative at the institution or in the region.
- The investment will enable recruitment and retention of top faculty.

Please see the Impact section of the Application Instructions on page 4 for more details.

How well the requested equipment supports these impact criteria will be a major consideration in the evaluation of the proposals. A university research administrator must document this impact in the required letter of support (see page 7).

Equipment/instruments must be designated for research purposes only.

⊗ *IIG funds cannot be requested for purchase of equipment primarily used for student education or training, workforce development, or clinical care (billable) purposes.*

Eligibility Requirements

Principal Investigator

The principal investigator (PI) must be employed as a permanent, full-time core facility director or faculty member at a North Carolina academic or nonprofit research institute. The PI must also have technical expertise directly related to the type of equipment requested (as documented in the biosketch).

⊗ *An IIG principal investigator may have no more than two concurrent active awards from the Center.*

⊗ *An institution that has received NCBiotech equipment grant funding within the past two years is ineligible to receive an IIG award for the purchase of similar equipment.*

Institutional Authorization

Each application must be authorized in a letter of support from a senior research executive representing the applicant institution (*e.g.*, Vice Chancellor of Research or equivalent). See page 7. This requirement is <u>not</u> fulfilled by the signature on the proposal Cover Sheet.

Major Users

The number of major users who must be identified is dependent upon the size of the university or research institution.

- Requests from R1 research universities (Duke University, North Carolina State University, and University of North Carolina at Chapel Hill) require at least SIX major users.

- Requests from all other NC institutions require at least THREE major users.

The proposal must list the intended major users of the equipment along with an explanation of how the requested instrument will advance their projects' research objectives. Major users may have university, industry, or government research affiliations within or outside of the PI's institution.

Equipment

Requested equipment must be integrated into a core facility. See the IIG FAQs (*www.ncbiotech.org/grant-faq*) for the definition of a core facility.

Requests should focus on high-cost, state of the art equipment ($30,000 minimum request). Examples: mass and nuclear magnetic resonance spectrometers, X-ray diffractometers, electron and light microscopes, cell sorters, biomedical imagers.

Requests for combinations of equipment (totaling at least $30,000) that bring new research capability to the core facility will also be considered. Proposals of this kind must demonstrate that the capabilities of the combined equipment meet one or more of the impact criteria. A presubmission consultation with staff is recommended for such requests.

⊗ *Any equipment purchased prior to the official award activation is ineligible for an IIG.*

⊗ *Requests for equipment to be obtained through a rental or a lease-to-own agreement are ineligible for an IIG.*

Note: If funding is awarded, applicants must list their facility on the Center's core facilities website at *www.ncbiotech.org/core-labs.*

Funding & Matching Requirements

See Budget Guidelines on page 7 for details.

- Up to **$150,000** (maximum) may be requested for instruments to be purchased and installed within 12 months of award.

- A minimum 20% cash match requirement is required, representing the institution's contribution toward the purchase and support of the requested equipment. The match amount may be split among participating institutions to demonstrate commitment to inter-institutional requests.

  ***<u>Please note</u>**: The 20% match is calculated as a <u>percentage of the total equipment/project costs.</u>*

  All award funds are disbursed directly to the university or nonprofit research institute affiliated with the principal investigator.

⊗ *Biotechnology Center IIG grants do not support indirect costs or salaries.*

Preliminary Consultation

Although not required, a preliminary consultation may be helpful to the applicant prior to submission of an application. Please contact us **at least three weeks prior to the deadline** if you would like to schedule a consultation. Contact information is provided at the end of this document.

Resubmissions

Proposals not selected for IIG funding may be resubmitted one time in a subsequent cycle.

If this is a resubmission of a previously submitted IIG proposal, please contact Deborah De (contact information at the end of this document) to indicate your intent and schedule a consultation. You will receive instructions for including a response to the previous reviews in the resubmitted proposal.

Review Process

The review process has four parts:

- Examination by Biotechnology Center staff to assure that the proposed project meets the grant eligibility requirements.
- Prioritization of proposals based on fit with programmatic goals and degree of anticipated impact (see page 1, Program Purpose section).
- Peer review by out-of-state expert reviewers.
- Final review and decisions by the designated committee of the Center's Board of Directors.

Evaluation Criteria

Evaluation by program staff will focus on the degree of anticipated impact resulting from the NCBiotech investment. Those proposals that meet one or more of the impact criteria as defined in the Purpose section on page 1 and demonstrate the greatest degree of potential impact will be sent for external review.

Reviewers will score proposals on the following criteria:

Equipment:

- Is the need for the equipment well justified?
- Is the requested equipment appropriate and necessary for the projects proposed?
- Does the PI demonstrate a thorough knowledge of the current state-of-the-art in instrumentation technology options?
- Is the requested equipment state of the art?

Research Projects:

- How will the research projects of the major users be enhanced by access to the equipment?
- Do the major users have innovative research objectives?
- Do major users have adequate funding to support the proposed research?

Administrative Plan:

- Is the plan for management and maintenance of the equipment appropriate?
- Is there a plan to make the equipment widely accessible to users within the institution and beyond?
- Is the plan for equitable use of the equipment reasonable?
- Is the named advisory committee broadly based to balance interests of different user groups and to provide valuable oversight?
- Is there a plan to cover costs for maintenance, repairs, and supplies for the expected lifetime of the equipment?

Post-award Reporting

Post-award reports are required. More information on reporting requirements will be provided on request or if a grant is awarded.

After a grant is closed, participation is expected in biennial surveys to track information on subsequent funding, patents, licenses, publications, companies formed, jobs, *etc*. that are a direct or indirect result of an award. This information will be used in support of justifying state funds for our programs and may be collected for up to 10 years.

Information Release

It is the policy of the North Carolina Biotechnology Center to announce awards through press releases and other publications. These communications typically include the Project Title and Public Information Summary that are provided by the applicant with the online application. No information will be released on proposals that are not funded.

Confidentiality

As part of our grants review process, the NC Biotechnology Center routinely shares the contents of grant applications with both internal and/or external experts to assess the merits of each application. The Biotechnology Center will

endeavor to maintain the confidentiality of all information provided by the applicant. While measures are in place to assure the appropriate handling of all information provided, the applicant is responsible for limiting the disclosure of any sensitive information that should not be shared outside of the Biotechnology Center.

We encourage applicants to consult with their university's technology transfer office (academic applicants) or an intellectual property professional for more specific counsel as necessary.

Application Instructions

Application materials are located on the IIG webpage at *www.ncbiotech.org/IIG*. Please use the checklist provided to make sure all components of the proposal application are included.

The IIG proposal is comprised of four documents: Cover Sheet, Proposal, Budget Form, and Supporting Documentation. *The supporting documents must include a letter of impact from the applicant institution's chief research officer.*

Step 1: Read the Guidelines & Instructions

Thoroughly read the IIG Program Guidelines, Instructions and *FAQs* on our website prior to submitting an application. If you have any questions about the program, use the contact information at the end of this document.

⊗ *Applications that do not follow all of these requirements may be declined without review.*

⊗ *Applications that do not have a fully signed coversheet at the time of application may be administratively declined without external review. Signatures of the sponsored research office are required and can take multiple weeks to achieve. Plan your submission accordingly.*

Step 2: Prepare the Proposal

General Proposal Formatting Guidelines

- Use standard font (such as Times New Roman, Calibri, or Cambria) no smaller than 12 point.
- Page set-up should be for single-spacing on 8½"x11" paper.
- Number each page.
- Margins should be ¾" to 1".
- Each section should be titled using the header sections listed below and should match the Table of Contents.
- Do ***not*** use logos or letterhead on any pages of the Proposal *except* for support letters.
- Judicious use of headings and white space for ease of reading is appreciated.

Proposal Requirements

The Proposal must include the following sections:

Table of Contents
Include title, PI name, institution, Core Facility Name, and page numbers.

Abstract
The Abstract (brief project summary) is entered into the online application form rather than as a section of the Proposal. See Step 6 for instructions.

Impact *(1/2 – 1 page recommended)*
Provide a description of the project and how the NCBiotech investment will impact North Carolina's life sciences ecosystem and its culture of innovation.

Impact must be demonstrated by meeting one or more of the following criteria:

- **The requested equipment will fill a gap in the NC life sciences ecosystem by enabling scientific advances not previously possible.** Specify the new lines of research, new methods, and new experimental protocols that will be enabled.

- **The core facility and the requested equipment will serve a broad community of NC life sciences researchers, within and outside of the applicant institution.** Specify which departments, institutions, and companies will be served by the equipment.

- **The investment falls within a larger initiative at the institution or in the region.** Name and provide details about the initiative - who are its partners (if applicable) and what are its goals?

- **The requested equipment will enable recruitment and retention of top faculty.**

Objectives *(1/2 – 1 page)*
Describe what will be accomplished with the funding.

Project Plan *(maximum 15 pages, I-IV)*

I. Equipment

- **General description**
  State the manufacturer and model number of the equipment being requested. Give a general description of the requested equipment including the scope and capabilities of what it can be used for. Provide additional detail on any specific features or accessories that are being requested.

  You must submit an equipment price quote with your Supporting Documentation file, limited to 3 pages each.

- **Justification of equipment selection**
  - For the requested equipment, discuss its advantages and compare its performance to competing brands/models.
  - Justify your choice of manufacturer and model, as well as address how the requested equipment and its accessories will meet the specific research needs of the major users as well as its applicability to a broader research user base. A cost analysis may be beneficial for specific equipment.

- **Current research capabilities of the core facility and justification of need**
  - Discuss the core facility's current status, including the equipment that is presently available and a brief description of the services offered.
  - Discuss how investigators are currently handling the technical needs that will be fulfilled by the requested equipment.
  - Provide an inventory of identical or similar instruments existing at your institution or neighboring research institutions; describe why each instrument is unavailable or inappropriate for the user group in this application.
  - Provide sufficient justification of why the requested equipment is needed and how it will add to the core facility's capabilities.

II. Research Projects

- **Overview**
  Describe the major objectives for use of the equipment, including whom the equipment will serve.

- **Projected usage table**
  Provide a table listing name, title, affiliation and department, and annual percent usage for each major user.

- **Major users**
  Provide a one page or less research project summary for each user up to a **maximum of eight major users**. The research project summary must include the following components:

  - Name and department of the major user.
  - Title of the research project.
  - Currently available source(s) and amount of funding for the project.
  - Project's connection to life sciences research.
  - Value of the equipment for advancing the research objectives.
  - Sufficient technical detail about the types of samples or specific experimental protocols to be employed to allow evaluation of whether the equipment is appropriate and necessary for the project.
  - Summarization of the benefits the requested instrument will provide toward answering specific scientific questions. Highlight any new lines of research that will be enabled.
  - Justification for special equipment features or accessories (as applicable).

- **Additional users table (if applicable)**
  List other potential users at the applicant's institution or nearby institutions. For each additional user, provide their name, department, institution and a one- to two-sentence description of their research focus.

III. Core Facility Administration and Operation

- **Advisory committee**
  Provide name, affiliation, and qualifications of the members of the core facility advisory committee. Discuss the frequency of committee

meetings, their mechanism for resolving disputes, and how they will balance the interests of different user groups.

- **Administrative responsibility**
  Discuss who will have ultimate authority for equipment operations, long-term maintenance, user scheduling, and user fees, etc. Also include the name of the person who will have ultimate authority to administer the facility. List the qualifications of this individual(s).

- **Technical responsibility**
  Discuss who will have day-to-day responsibility for technical operations, including routine maintenance, troubleshooting, and performance evaluations, etc. List the qualifications of this individual(s).

- **Location**
  - Describe the current location of the facility and/or provide the location of where the equipment will be housed.
  - Provide the building and specific room location.
  - Discuss any special measures required (e.g. vibration platform, temperature control, back-up generator, etc.).

- **User access**
  - Discuss whether you will limit use of the equipment in any way. If so, describe whether major users will receive priority over others and why.
  - If users outside of the applicant's institution will be allowed access to the equipment, discuss how advertisement will be accomplished and how priorities on use will be set.
  - Describe an overall pattern of workflow and discuss any issues with potential to create bottlenecks in flow.

- **User training**
  - State whether user training on the equipment will be provided and who will be administering the training, if applicable.
  - Discuss core facility safety protocols and how these protocols are taught and enforced.

- **Regulated research subjects and biohazards**
  If applicable, discuss how the core facility manages policies and procedures applicable to projects involving human subjects, laboratory animals, or hazardous agents and materials.

- **Equipment Use**
  Indicate how equipment scheduling, usage tracking and billing is handled.

- **Future Research Funding**
  Indicate how you will track additional funding that is enabled by use of this equipment.

IV. Long-term Support

Explain the sources of funds to cover supplies, maintenance service contracts, and repairs. Include a discussion of user fees. Include letters of support if applicable. (Letters for long-term support are submitted as part of the Supporting Document PDF.)

Budget Justification *(does not count toward page limit)*

Explain each line item in the Budget (not just the portion requested from the Biotechnology Center). Explain the sources of matching funds.

The total match must be at least 20% <u>of the total equipment cost.</u>

Project Timeline *(does not count toward page limit)*
Provide a timeline for ordering, installation, setup, training if required, and implementation and use. See our *FAQs* for examples.

Bibliography *(does not count toward page limit)*
Give full citation including title and complete author list. If complete author list is extensive, include the first three (3) authors listed.

Current and Pending Grants *(does not count toward page limit)*
For each major user, include a list of current or pending grants. Provide the following information:
- Funding agency
- Project title
- Award amount
- Duration of award

Biographical Sketches *(does not count toward page limit)*
Provide one-page biosketches for the proposal PI, Core Facility Director, up to eight major users and up to two other key administrative/technical personnel. Biosketches should list no more than five (5) publications documenting each investigator's expertise in the proposed project.

The PI's biosketch must demonstrate expertise in the equipment being requested (see Eligibility Requirements page 1.)

Limit each biographical sketch to no more than one (1) page using the Biographical Sketch form provided by the link on the website. Include position title and department. Insert the biographical sketches at the end of your proposal document.

Convert Your Proposal into a PDF Document
Convert your proposal document into a PDF file.

⊗ *Do not print and scan the proposal to convert to PDF – this will cause the PDF to be significantly larger and distort the quality of the text and graphics.*

Step 3: Complete the Budget Form
Prepare your Budget using the **IIG Budget Form** provided by the link on the website. The Budget Form is provided in Excel format. **Use of this form is required.** The title of the project **must** be included in the "Project Title" box at the top of the Budget Form.

All funds requested on the Budget Form must be justified under the Budget Justification section of your proposal (described above).

When completed, please convert the budget form to a PDF file for upload.

Budget Guidelines

A maximum of $150,000 may be requested.

Match Requirement:

A minimum 20% of the total equipment/project cost must be provided as cash match. The cash match represents the commitment of the institution(s) to contribute towards the purchase and support of the requested equipment. The match amount may be split among participating institutions to demonstrate commitment to an inter-institutional effort. The match must be documented in a letter of support and included in the Supporting Documentation.

Allowable items as requested funds (in addition to equipment costs):

- Minor renovation of core facility space to support/accommodate the equipment.
- Hardware/software necessary to run the equipment.

Allowable items as matching funds (in addition to equipment costs):

- Minor renovation of core facility space to support/accommodate the equipment.
- Hardware/software necessary to run the equipment.
- Extended warranties or service contracts that are paid for at the time of equipment purchase.

Unallowable items as requested or matching contribution include:

- Items to be purchased independently for the facility or lab are not allowable as match.
- Overhead/indirect costs.
- Salaries for technicians or other personnel
- Equipment that has already been purchased by the institution (even if a purchase order has been issued but the equipment has not yet arrived).
- Renovations/construction that has already been initiated or completed.
- Rental or lease-to-own equipment.

Step 4: Gather Supporting Documentation
Combine the following Supporting Documents into a ***single*** PDF file. You can accomplish this by scanning related files together and then save as or convert to PDF.

- **Letters of Support**
  - **Letter of impact** (Required)
    A letter is required from the institution's chief research officer or similar individual responsible for oversight of the institution's research facilities (e.g., Vice Chancellor of Research, Vice Provost for Research, university Provost).

    This letter should attest to the need for the requested equipment and detail the

anticipated impact it will have at the institution and in the broader life sciences research community in North Carolina (as stated in the "impact" section of the proposal; see Step 2, page 4).

- **Commitment of matching funds** (Required)
  The specific dollar value of the matching funds must be included in the letter(s). This letter(s) must be on letterhead and signed by an individual who is authorized to commit the matching funds.

- **Major users** (Required)
  Each major user whose project is included in the proposal must prepare a letter of support endorsing the need for the equipment.

- **Sources of long-term support** (if applicable)

- **Equipment Price Quote(s)**
  Include price quotes for the equipment requested. The price quote **may not exceed three (3) pages**.

  ⊗ *Do not include pages showing terms of sale.*

Step 5: Complete the Coversheet

Use the Cover Sheet form provided on the IIG webpage.

The Cover Sheet must be signed by the PI and an authorized official of the Sponsored Research Office of the university or non-profit institution.

⊗ *Applications that do not have a fully signed coversheet at the time of application may be administratively declined without external review. Signatures of the sponsored research office are required and can take multiple weeks to achieve. Plan your submission accordingly.*

Step 6: Complete the Online Application Form

IMPORTANT FIRST STEP:
The PI for the IIG proposal must register for an account on the NCBiotech Funding Portal at least five days prior to the deadline in order to submit a proposal. The link is *https://ncbiotech.fluxx.io*.

If you have applied for a grant using the Funding Portal previously *(for any NCBiotech funding program), you do not need to register again.*

The PI for the proposal must submit the proposal through her/his account. IIG proposals cannot be submitted through accounts belonging to an OSR representative, administrative personnel or others.

Click *here* for more information on the registration and application process.

⊗ *Proposals sent by e-mail or hard copy will not be accepted.*

Complete all fields of the IIG online application form as instructed.

Abstract
Enter the project abstract into the corresponding section on the online application. Character limitations apply.

Public Information Summary
This summary is intended for a general audience, allowing the Biotechnology Center to share granting information with the general public and other interested parties.

- This summary should ***not*** include complex scientific terminology.
- The summary should convey to the citizens of NC why the project is important and what impact it will have.
- The maximum allowable length for this summary is ***50 words.***

Step 7: Upload the Required Documents

Follow the instructions in the application form for attaching the Required Documents.

All files should be uploaded as pdf documents.

The Cover Sheet, Proposal, Budget Form, and Supporting Documentation should each be attached as four separate files.

Step 8: Review and Submit

Carefully review your application package using the checklist provided on the website and then submit your IIG application prior to the Grant Program Deadline.

Submission of your grant application indicates that:

1. You have read and understand the information and directions in this Application Package and agree to be bound by the conditions stated herein.

2. You release the North Carolina Biotechnology Center from any claim for damages caused by:
   a. Disclosures required under the provisions of any North Carolina or United States law, statute, or regulation,
   b. Disclosures made in connection with the North Carolina Biotechnology Center's funding review and approval process,
   c. Disclosures required by rule or order of any court of competent jurisdiction, or
   d. Any other non-negligent, inadvertent, unintentional, unknowing, or immaterial disclosure.

3. All research conducted during the proposed project is performed in accordance with established university policies and procedures, including—but not limited to—policies and procedures applicable to research involving human subjects, laboratory animals, or hazardous agents and materials.

4. If the project proposed involves vertebrate animals, the project complies with federal guidelines for vertebrate animal care and experimentation.

You will receive a confirmation email notifying you that the Biotechnology Center has received your application. Any Center request for additional proposal information must be addressed by the deadline given.

Contact Information

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