



# START YOUR RESEARCH PROGRAM AT UGA

[research.uga.edu/start-your-research-program](https://research.uga.edu/start-your-research-program)

## What Does UGA Expect of Me?

- Research effort and progress toward tenure
- Safeguarding of intellectual property
- Research compliance (lab safety, biosafety, animal use, human subjects)
- Responsible conduct of research

## How Do I Get Funding?

- Find internal funding opportunities
- Find external funding opportunities
- Find a collaborator / consultant
- Write proposals
- Construct budgets
- Submit proposals
- Roles and responsibilities

## Who Can Help Me With...?

- Graduate faculty status
- International researchers
- Recruiting researchers
- Budgeting for researchers
- Research assistants
- Postdoctoral trainees
- Summer salary
- Cost sharing (your research effort)

## Starting My Lab

- Opening and closing a research laboratory
- Procurement of research equipment, supplies
- Shared-use core research facilities



**Office of Research**  
**UNIVERSITY OF GEORGIA**

# CONNECT WITH UGA RESEARCH

[research.uga.edu](https://research.uga.edu)

## Proposals & Awards

Helps investigators and research administrators navigate through the sponsored projects lifecycle. [spa.uga.edu](https://spa.uga.edu)

## Compliance & Safety

Provides professional expertise and service to facilitate research conducted with integrity. [research.uga.edu/compliance](https://research.uga.edu/compliance)

## Core Facilities

Provides state-of-the-art equipment and services to researchers at UGA, other universities and industry. [research.uga.edu/core-facilities](https://research.uga.edu/core-facilities)

## Centers & Institutes

Facilitates instruction, scholarly and creative activity, and research collaborations across disciplines. [research.uga.edu/centers-institutes](https://research.uga.edu/centers-institutes)

## Tech Transfer & Startups

Fosters a network of industry and university partners to develop new products and companies based on UGA research. [research.uga.edu/gateway](https://research.uga.edu/gateway)

## Internal Grants & Awards

Supports early work in new areas of endeavor, especially by early-career faculty, including travel to conferences and symposia. [research.uga.edu/iga](https://research.uga.edu/iga)

## Communications

Aims to raise public visibility and understanding of UGA research, scholarly & creative activity, and innovations. [research.uga.edu/communications](https://research.uga.edu/communications)



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Innovation Gateway  
*Office of Research*

It's easy to get more information on Innovation Gateway, what we do, and how we can help you as a researcher at UGA.

- [research.uga.edu/gateway](http://research.uga.edu/gateway)  
706-542-1404  
[gateway@uga.edu](mailto:gateway@uga.edu)
- Sign up for our newsletter on the website, which features the successes of UGA researchers
- Follow us on LinkedIn and Twitter (UGA Innovation Gateway)
- Sign up for email notifications about upcoming events

**POINTS OF PRIDE**

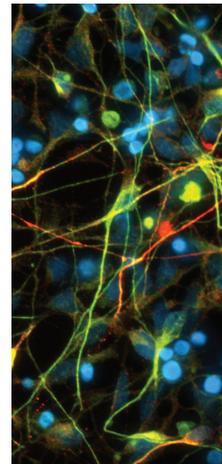
**675+ PRODUCTS**  
introduced to the marketplace

**\$128 MILLION**  
annual economic impact from jobs created

**160+ COMPANIES**  
launched based on UGA research



## UGA Inventor's Quick Guide



## ABOUT INNOVATION GATEWAY

- Provides support to all UGA researchers, including graduate students, post-docs, inventors and entrepreneurs
- Oversees patenting, licensing, transfer of materials and knowledge
- An unit of UGA Office of Research



## HELPFUL INFORMATION FOR INVENTORS

**Timing of publications and other public disclosures can have a significant impact on the ability to patent your invention.**

- Contact Innovation Gateway BEFORE publically disclosing the possible invention
- Posters, published abstracts and oral presentations are types of public disclosures
- Once an invention is described publically without a patent application filed, all foreign patent rights are lost
- U.S. patent rights are available for another 12 months SO LONG AS no one else invents the same thing and files for patent protection before you do

**An invention disclosure made to the Innovation Gateway office is easy.**

- Easy online submission process at [research.uga.edu/gateway](https://research.uga.edu/gateway)
- Disclose written descriptions of inventions, including research tools
- Attach manuscripts or other prepared reports on the invention to the disclosure record
- Provide data, funding sources, other inventors
- Innovation Gateway will respond after the disclosure is received and review the technology for patentability and commercial desirability
- Requirement of UGA's Intellectual Property Policy that researchers disclose inventions

**Inventors are people who make a creative contribution to the invention's concept.**

- Other researchers may be authors on a manuscript but not an inventor
- Researchers who carry out work under the direction of someone else may not be an inventor
- Ultimately, inventorship is a legal determination

**Transfer of Materials and Confidential Information requires an agreement, which is easy to request.**

- Request Material Transfer Agreements (MTA) and Confidential Disclosure Agreements (CDA) online at [research.uga.edu/gateway](https://research.uga.edu/gateway)
- Researcher provides information about whom the transfer is with, the nature of the material or information, purpose of the transfer
- Online request speeds up the agreement process

**Licensing revenue from the commercialization of inventions or research tools are distributed according to UGA's Intellectual Property Policy.**

After legal costs have been reimbursed:

1. First \$10,000 to the inventor(s)
2. Then 25% to the inventor(s)
3. 10% to the inventor's research program
4. 10% to the inventor's department / unit
5. 15% to UGARF\* Operations; and
6. 40% to UGARF's Research Fund

More information at [research.uga.edu/documents/intellectual-property](https://research.uga.edu/documents/intellectual-property)

**Innovation Gateway can help you with a start-up company, created around your invention.**

- Provide advice on creating a company and determining commercial desirability of the potential product
- Negotiate license to the invention with the start-up
- Make connections with business and legal expertise and fundraising options
- Provide physical incubator space on UGA campus, or assist in locating other available facilities for the start-up company

\* UGARF: UGA Research Foundation owns intellectual property developed by UGA employees. Innovation Gateway is the commercialization arm, working to protect and license UGARF's intellectual property portfolio.



# PROPOSAL ENHANCEMENT EVENTS

August 7, 2018

## NIH MIRA Funding Mechanism Lunch-and-Learn

Have you considered applying for the NIGMS Maximizing Investigators' Research Award (R35) to support your research program? NIGMS has announced that it intends to eventually support most investigators through the MIRA R35 mechanism. Bring your lunch and come learn more about the MIRA for early stage and established investigators. A faculty member who has reviewed MIRA applications, along with Proposal Enhancement staff, will discuss the program and the application, and answer your questions about it. This session will be in Coverdell S175 from 12:30pm-1:45pm. Coffee and refreshments will be provided. **Register here:** <https://form.jotform.com/81966005653157>.

August 17, 2018

## Sign Up for Proposal Peer Review: NIH R01/R21 Proposals (with October/November Deadlines)

Are you planning to submit a proposal to NIH in October or November? Would you like to have colleagues review your proposal before you submit it? Sign up for the Proposal Peer Review program to exchange proposals and comments with UGA colleagues, and receive an additional round of review by Proposal Enhancement. To participate in this program, you must have a complete draft of your Specific Aims and Research Strategy ready by September 4. Resubmissions welcome! **Register here:** <https://form.jotform.com/82064081329151>.

September 14, 2018

## Coffee with the Pros: Writing Successful NSF Grants

Learn from UGA experts about the ins and outs of submitting a successful NSF grant application. Whether you're submitting a proposal for the first time or trying to get that resubmission funded, this panel is for you! Panelists will discuss an interdisciplinary range of NSF programs and priorities, including NSF's commitment to broadening participation of underrepresented scholars. This panel will take place in Coverdell S175 from 9:30am-11am. Coffee and refreshments will be provided. **Please RSVP to Steph Tucker at [st@uga.edu](mailto:st@uga.edu).**



**Proposal Enhancement**

*Office of Research*

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# PROPOSAL ENHANCEMENT EVENTS

November 2018 (date TBD)

## Coffee with the Pros: Strategies for Leading Large, Complex Proposal Efforts

Faculty are often intimidated by the time and energy it takes to organize large, complex proposals for research centers or training programs, but the benefits of applying are many. Whether you're just contemplating an application or ready to assemble a proposal team, you'll learn what it takes to organize a competitive center or training grant proposal at this expert panel. **Please RSVP to Steph Tucker at [st@uga.edu](mailto:st@uga.edu).**

December 2018 (date TBD)

## NIH Mock Review Panel

Are you interested in learning about the NIH panel review process? Come sit in on a mock NIH review panel session! UGA faculty who regularly serve on NIH Study Sections will review actual draft proposals from selected faculty, and conduct a review panel meeting that will be open for viewing. Those who are new at submitting to NIH are especially encouraged to attend. If you are interested in participating as a submitter or reviewer, **contact Rebecca Terns at [terns@uga.edu](mailto:terns@uga.edu).**

December 14, 2018

## Sign Up for Proposal Peer Review: NIH R01/R21 Proposals (with February/March Deadlines)

Are you planning to submit a proposal to NIH in January or February? Would you like to have colleagues review your proposal before you submit it? Sign up for the Proposal Peer Review program to exchange proposals and comments with UGA colleagues, and receive an additional round of review by Proposal Enhancement. To participate in this program, you must have a complete draft of your Specific Aims and Research Strategy ready by January 7. Resubmissions welcome! **Contact Jake Maas at [jnmaas@uga.edu](mailto:jnmaas@uga.edu) for more details.**

**Find out more at [research.uga.edu/proposal-enhancement](http://research.uga.edu/proposal-enhancement).**



**Proposal Enhancement**

*Office of Research*

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## Checklist of Attachments for NIH Research Project Grant (Parent R01)



### Due dates

New applications: Oct. 5, Feb. 5, June 5      Resubmissions: Nov. 5, Mar. 5, July 5

### NIH Parent R01 FOA:

<https://grants.nih.gov/grants/guide/pa-files/PA-18-484.html>

### NIH SF424 Instructions for Research (R) applications (PDF format):

<https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/research-forms-e.pdf>

The R01 FOA instructions (above left) are used in conjunction with the general NIH SF424 Instructions for Research applications (above right). Follow the SF424 Research (R) instructions except where instructed to do otherwise in the R01 FOA. FOA instructions always supersede SF424 instructions. (For comprehensive instructions to complete the application forms for any type of grant program, see the General (G) SF424 instructions: <https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general-forms-e.pdf>)

The R01 application consists of a series of Forms that you will fill out in the eResearch Portal. Note: not all of the Forms that comprise an application are referenced here. Consult your departmental grants coordinator or SPA grants officer for help filling out these forms. Find your SPA representative here: <https://spa.uga.edu/find-spa-representative/>.

**This checklist includes documents that you will attach to the forms or your application as PDFs (Attachments)**, as well as quick links to instructions for those documents (Link to Attachment Instructions). It also includes the name of the Form where the document will be attached (Parent Form) and a link to the complete instructions for that form (Link to Form Instructions).

Read Attachment Instructions to determine whether attachments noted "if applicable" are required or appropriate for your application.

### Attachment:

### Parent Form (attach to):

Name:	Link to Attachment Instructions:	Name:	Link to Form Instructions:
Project Summary/Abstract	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#7">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#7</a>	R&R Other Project Information	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm</a>
Project Narrative	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#8">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#8</a>		
References Cited	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#9">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#9</a>		
Facilities & Other Resources	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#10">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#10</a>		
Equipment	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#11">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.220-r&amp;r-other-project-information-form.htm#11</a>		
Biosketch	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.240-r&amp;r-seniorkey-person-profile-(expanded)-form.htm#Instructions">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.240-r&amp;r-seniorkey-person-profile-(expanded)-form.htm#Instructions</a>	R&R Senior/Key Persons Profile	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.240-r&amp;r-seniorkey-person-profile-(expanded)-form.htm">application-guide/forms-e/general/g.240-r&amp;r-seniorkey-person-profile-(expanded)-form.htm</a>
Personnel Justification (required for all PHS 398 Modular Budgets)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.320-phs-398-modular-budget-form.htm#2">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.320-phs-398-modular-budget-form.htm#2</a>	PHS 398 Modular Budget	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.320-phs-398-modular-budget-form.htm">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.320-phs-398-modular-budget-form.htm</a>
Consortium Justification (required for all PHS 398 Modular Budgets with Subawards)			
Additional Narrative Justification (required if different numbers of modules are requested in different years)			
Budget Justification (required for all non-modular budgets)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.300-r&amp;r-budget-form.htm#L">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.300-r&amp;r-budget-form.htm#L</a>	R&R Budget Form	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.300-r&amp;r-budget-form.htm">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.300-r&amp;r-budget-form.htm</a>
Specific Aims	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#2">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#2</a>	PHS 398 Research Plan	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm</a>
Research Strategy	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#3">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#3</a>		
Progress Report Publication List (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#4">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#4</a>		
Vertebrate Animals (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#5">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#5</a>		
Select Agent Research (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#6">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#6</a>		
Multiple PD/PI Leadership Plan (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#7">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#7</a>		
Consortium/Contractual Arrangements (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#8">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#8</a>		
Letters of Support (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#9">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#9</a>		
Resource Sharing Plan (if applicable) Including: Data Sharing Plan Sharing Model Organisms Genomic Data Sharing	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#10">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#10</a>		
Authentication of Key Biological and/or Chemical Resources (if applicable)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#11">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#11</a>		
Appendix (if allowed)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#12">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.400-phs-398-research-plan-form.htm#12</a>		
Human Subjects and Clinical Trials Information (required, whether you answered yes OR no to the question "Are human subjects involved?" on the R&R Other Project Information Form)	<a href="https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.500-phs-human-subjects-and-clinical-trials-information.htm">https://grants.nih.gov/grants/how-to-apply-application-guide/forms-e/general/g.500-phs-human-subjects-and-clinical-trials-information.htm</a>		

Starter Checklist and Suggested Timeline for NSF Grants										
<b>Check your program solicitation for full submission instructions. Most NSF programs require additional or modified components for full submission. This checklist is only a starting point.</b>										
		T-8 WEEKS	T-6 WEEKS	T-4 WEEKS	T-3 WEEKS	T-2 WEEKS	T-1 WEEK	T-2 DAYS	UGA DEADLINE	NSF DEADLINE
	Notes	[date]	[date]	[date]	[date]	[date]	[date]	[date]	[date]	[date]
<b>Suggested Reviewers (opt)</b>	Single copy. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC1b">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC1b</a>							Complete	Final	
<b>Collaborators &amp; Affiliations</b>	Single copy. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC1e">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC1e</a> Link to template: <a href="https://www.nsf.gov/bfa/dias/policy/coa/coa_template.xlsx">https://www.nsf.gov/bfa/dias/policy/coa/coa_template.xlsx</a>			Request			Receive (and combine)		Final	
<b>Cover Sheet</b>	<a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2a">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2a</a>					Complete			Final	
<b>Project Summary</b>	1 page (upload to check) <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2b">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2b</a>	Solid full outline			Solid full draft to OPE	Receive comments from OPE			Final	
<b>Project Description</b>	15 pages Must include separate sections on both Broader Impacts and Intellectual Merit (NEW for 2018). If applicable, include Prior NSF Support. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2diii">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2diii</a>	Solid full outline			Solid full draft to OPE	Receive comments from OPE			Final	
<b>References</b>	No page limit specified in PAPPG. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2e">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2e</a>							Complete	Final	
<b>Biographical Sketches</b>	2 pages. For all senior personnel. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2f">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2f</a>	Have all personnel identified	Have all personnel confirmed	Request					Final	
<b>Other Personnel (opt)</b>	Info on exceptional qualifications								Final	
<b>Budget</b>	<a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2g">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2g</a>	Early budget meeting	Follow-up budget meeting	Full draft		Review		Complete	Final	
<b>Budget Justification</b>	3 pages (also for Subawards) <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2g">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2g</a>			Full draft		Review		Complete	Final	
<b>Subawards (if applicable)</b>		Have all subawards identified	Have all subawards confirmed						Final	
<b>Current &amp; Pending Support</b>	PI and senior personnel. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2h">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2h</a>			Request			Receive	Complete	Final	
<b>Facilities, Equip, Other</b>	Aggregated description. Both physical and personnel resources. Includes resources collaborators will provide. No page limit specified in PAPPG. <a href="https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2i">https://www.nsf.gov/pubs/policydocs/pappg18_1/pappg_2.jsp#IIC2i</a>			Request			Receive (and combine)		Final	



## PROPOSAL SUBMISSION CHECKLIST (detailed)

Proposals for external funding are submitted by [eligible Principal Investigators](#) (PI) to SPA Pre-Award for review and institutional signature prior to submission to sponsor.

- Check that Project has been initiated in [Portal](#)**
  
- Obtain Proposal Guidelines from the Sponsoring Agency**  
Request for Proposal (RFP), Program Description, Agency Forms and Certifications (if applicable), etc. Individual agency forms identify specific requirements for completing the various proposal elements including the cover page, proposal narrative, budget, current and pending support, and biographical sketch. Review sponsor guidelines (e.g., RFP, RFA, BAA, etc.) to determine requirements and appropriate application procedures. In most cases, noncompliance with agency requirements will result in return of proposal without agency review.

Review the guidelines ahead of time and mark those items within the RFP that will need more attention and address accordingly. **PLAN AHEAD WHEN POSSIBLE.**

- Award terms and conditions that UGARF/UGA would be agreeing to at proposal submission should be vetted before proposal is submitted.
  
- Unusual proposals** (as determined by Grants Administrator should be escalated to the Director of SPA Pre-Award. Proposals to the following sponsors should *always* be escalated and possibly subject to backup review:
  - U.S. Department of State
  - U.S. Department of Justice
  - U.S. Department of Labor
  - National Endowment for the Arts
  - National Endowment for the Humanities
  - Corporation for National & Community Service
  - United States Agency for International Development (USAID)

*The Director of SPA Pre-Award may determine what additional steps are needed for review.*

- Verify University Requirements**  
Proposals may be submitted by eligible faculty only ([Eligibility to Submit Proposals](#))
  - Limited Submission**  
Please contact Limited Submissions office for verification. Provide the Portal FP# to Lauren Sisko [lsisko@uga.edu](mailto:lsisko@uga.edu)
  
- Signatures**  
Who has authority to sign off on the proposal submission? In almost all cases, this will be the SPA Pre-Award Grants Administrator.

In rare circumstances, a proposal could require the signature of someone outside of SPA Pre-Award, e.g., some proposals require the President's signature or an affidavit from the EOO Office. SPA Pre-Award will

## PROPOSAL SUBMISSION CHECKLIST (detailed)

determine this based on the RFP and agency instructions and alert the PI as soon as possible. Please note that the additional signatures will be obtained in accordance with established procedures at UGA.

### **Signature from President or Provost**

- SPA Pre-Award Staff completes the Routing Slip (also known as blue routing sheet) and prints on **blue paper**: [www.busfin.uga.edu/forms/pres\\_routing\\_slip.pdf](http://www.busfin.uga.edu/forms/pres_routing_slip.pdf)

Some letters require editing and/or a hand-signed signature, with no stamp or graphic allowed. Include the following with the blue routing sheet.

- Abstract explaining the scope of the research and funding source;
- List of institutional commitments and notation of whether they are new or existing; and
- Allow a minimum of one week lead time.

In the comments section, provide instructions for the return of the document (i.e., Please call [name of SPA Pre-Award Grants Administrator, (706) XXX-XXXX].)

- Send to the VP for Research for approval/signature.

### **Hand-carry request to President's or Provost's Office.** \* Signature request must have required (blue) routing sheet affixed to the support paperwork.

*There are times when the president may be out of the office for 10 days or more (although that is rare). Call ahead to Amy Andrews on [706-542-6529 or [aandrews@uga.edu](mailto:aandrews@uga.edu)] when you've determined the deadline so you can plan accordingly.*

\* Signature should be obtained from the lowest possible authority. If the President or the Provost can sign, use the Provost. If the Provost and the VP for Research can sign, use VP for Research.

### **Verify Facilities & Administrative (F&A) or Indirect Cost Rate**

Provide documentation if required. (If different from UGA allowable rates, provide a copy of agency allowable rate or guidelines.)

Is the federally negotiated F&A rate being used? If not, one of the following must apply:

- The sponsor is a non-profit and has a written policy capping F&A
- The sponsor is federal and F&A is limited by statute or by RFP/RFA/Solicitation
- The PI has obtained an F&A waiver from VP for Research or delegate
- The funding is from a non-profit for graduate student salary/fringe only

### **Verify whether there is cost share, OVPR match, or third party match.**

- Approved by department head/dean
- Will be approved retroactively

### **Significant Financial Interest Disclosure**

If a proposal is to an agency using the Public Health Service Financial Conflict of Interest (PHS FCOI) regulations, then Significant Financial Interest (SFI) Disclosure must be obtained prior to proposal submission for all investigators. A list of agencies that use the PHS FCOI regulations can be found here:

## PROPOSAL SUBMISSION CHECKLIST (detailed)

[http://sites.nationalacademies.org/PGA/fdp/PGA\\_070596](http://sites.nationalacademies.org/PGA/fdp/PGA_070596) The PI can manage his/her SFI Disclosure in the Office of Research eResearch Portal at any time by logging in and clicking on manage SFI Disclosure. Non-UGA employees must complete the Annual Disclosure of Financial Interests for Non-University of Georgia Investigators. For all external proposal submissions, basic COI is captured by the Portal and should be in process when the proposal is submitted. Filling out the transmittal form in the Portal begins this process.

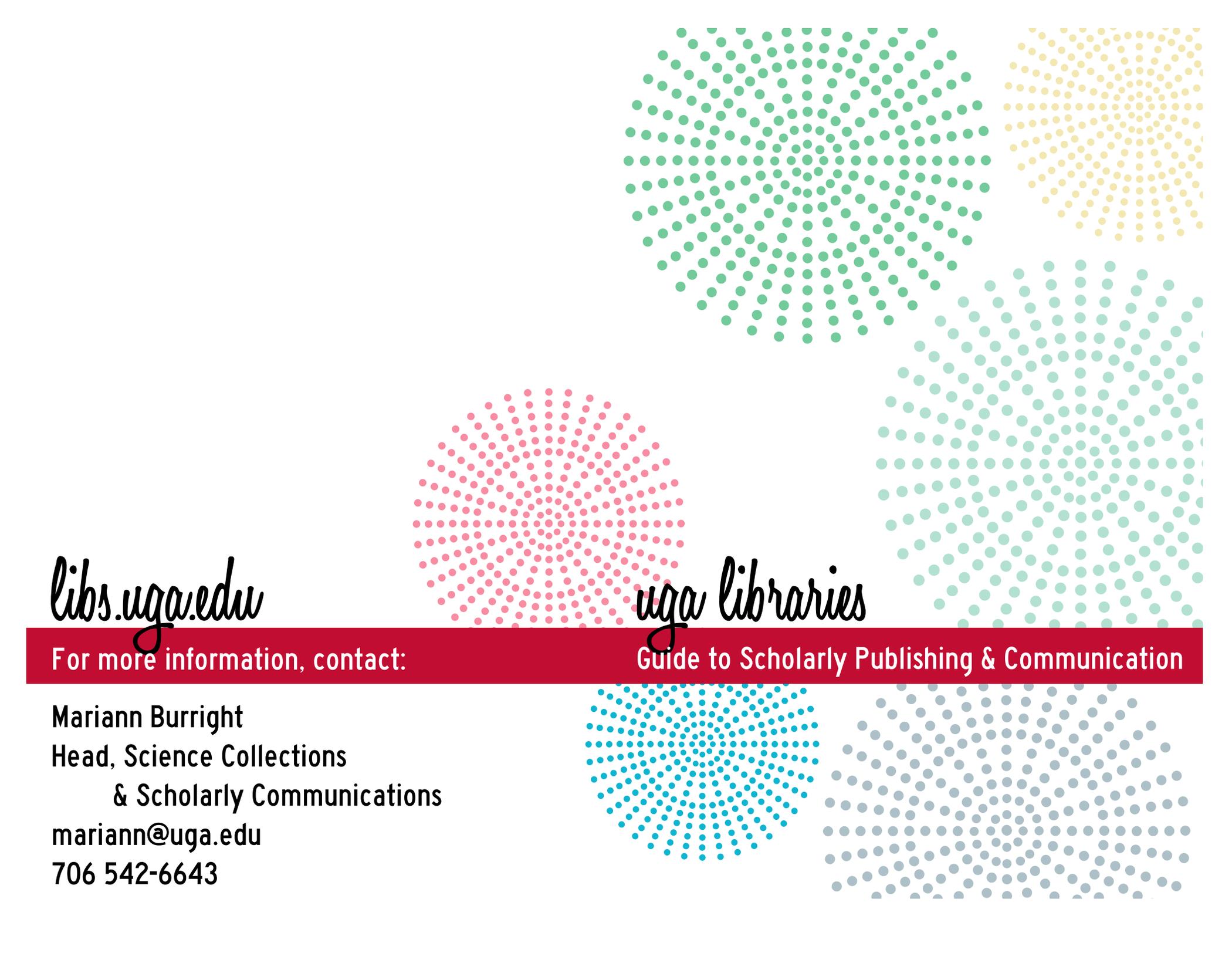
### Subcontracts

(A collaborative arrangement in support of a research project through a formal agreement.)

- Consortium Statement/Letter of Commitment or Intent to Collaborate approved by authorized official of subcontractor
- Name and contact info of negotiator
- Statement of Work
- Budget
- Any other forms required by Sponsor

### Final review

- Is the proposal being submitted to the correct RFP/RFA/Solicitation? If there is any uncertainty, confirm in writing with PI.
- Review the required components of proposal in Sponsor Guidelines to the investigator's proposal. Most proposals will have the following components for review:
  - Proposal Narrative**  
At a minimum, a Statement of Work is required.
  - Budget**  
If the agency does not specify a budget format, please use the form below.
  - Budget Justification**  
The narrative explanation of the itemized budget should parallel the budget line items.
  - Subcontracts (if applicable)**  
If known subcontractors are identified in the proposal narrative and/or budget, please provide the following documentation for each subcontractor: a Statement of Work, a budget and budget justification, and an institutional letter of approval.
  - Indirect Costs**  
Our federally negotiated indirect cost rates will be used whenever possible. Should an agency limit or prohibit indirect costs, please provide documentation.
  - Supplemental Documentation (if applicable)**
    - OVPR match – A letter should be provided to SPA Pre-Award by the investigator confirming the match
    - Third party match – Documentation of match should be provided by the party providing it.



*libs.uga.edu*

For more information, contact:

Mariann Burrigh  
Head, Science Collections  
& Scholarly Communications  
mariann@uga.edu  
706 542-6643

*uga libraries*

Guide to Scholarly Publishing & Communication

# Help with Publishing Your Work from the UGA Libraries

## The University of Georgia

**Libraries** offer services to help with your scholarly communication and publishing process. We offer individual consultation and group workshops for departments on the these topics.

## Copyright Questions

As you publish your research papers, retaining more control of your copyright(s) allows you, and others to use it with fewer legal restrictions, particularly after publication. When using copyrighted material for your teaching, whether in the f2f or online environment, knowledge of key provisions in the U.S. Copyright Act will help you make appropriate uses of those materials.

## Publishing Open Access

Open Access is free and immediately available to the reader. Publishing in reputable, peer reviewed OA journals gives your work more visibility and increases chances of your work being cited. The University of Georgia Libraries are institutional members of BioMedCentral, one of the premier Open Access publishers.

## Writing your Funder's Data Management Plan

With the 2013 White House Directive for open data sharing to federally funded research, you will be required to submit a Data Management Plan as part of your grant application to most if not all federal agencies.

## Archiving your work in Athenaeum @UGA

Have a paper, research poster, or a project you would like the world to see? Athenaeum@UGA is the University of Georgia's Open Access Institutional Repository (IR) showcasing the scholarly and creative works of UGA's faculty and students. We offer a permanent and stable URL for your work. Visit Athenaeum@UGA page above. Our IR services include online journal hosting for academic, peer-reviewed journals.

## Online Journal Hosting

The University of Georgia Libraries offer a journal publishing service to interested faculty and students of the University of Georgia community. We use Open Journal Systems to help you set up your peer-reviewed open access journal publishing.

## Open Education Resources

Open Educational Resources (OER) are instructional materials that are freely available for use, reuse, remixing, adapting, and sharing. A wide variety of free, high quality instructional content is available including stand-alone resources that can be mixed and combined to form larger instructional modules or full courses.

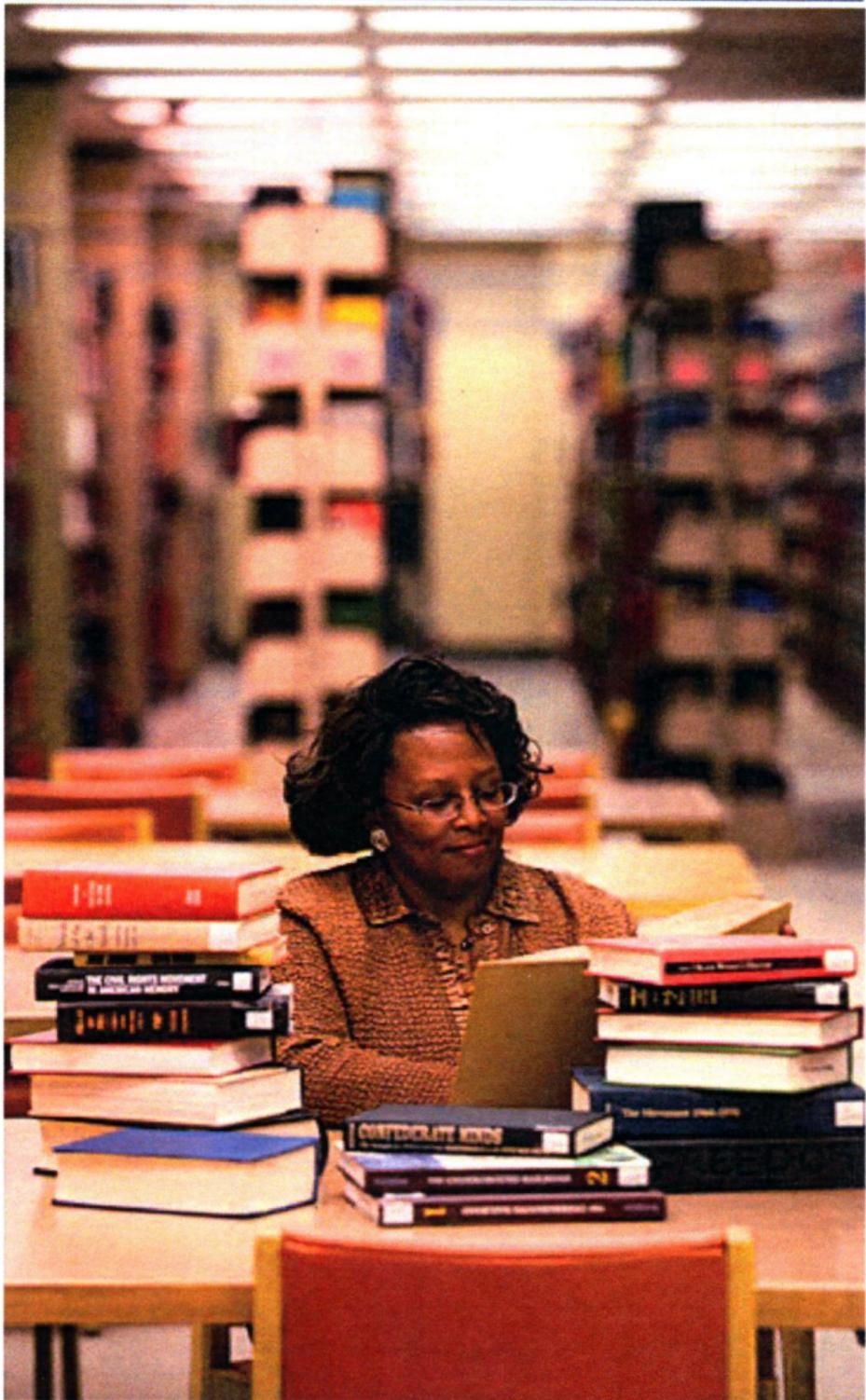
## What Does Open Mean?

Open educational resources are usually licensed with Creative Commons licenses that grant users specific rights for reuse, remixing, and distributing content.

To learn more, see [guides.libs.uga.edu/scholarlycommunications](https://guides.libs.uga.edu/scholarlycommunications)

# FAST FACTS

FOR FACULTY



University Libraries  
UNIVERSITY OF GEORGIA

# University of Georgia Libraries

## Faculty FYI

**Find** print and electronic resources in the catalog (GIL-Find). Place requests for retrieval and delivery services to have books sent to a location of your choice - [gilfind.uga.edu](http://gilfind.uga.edu)

**Borrow** Loan period = **1 year (365 days) + 2 automatic renewals**. Bound journals can be borrowed for 7 days.

**Faculty Delivery** Have books delivered to your department for pickup - [libs.uga.edu/faculty/services](http://libs.uga.edu/faculty/services)

**Dependent Privileges** Spouses and children of faculty are eligible for library privileges. **Contact Access Services for more information.**

**Proxy Borrowing** Designate a student or other representative to charge out materials for the faculty members' use - [libs.uga.edu/faculty/services](http://libs.uga.edu/faculty/services)

**GALILEO** Find peer-reviewed articles and more in the Libraries' electronic databases: [libs.uga.edu/research](http://libs.uga.edu/research).

**GIL Express** Search for items at other libraries in the USG and have books delivered to UGA: [gilfind.uga.edu/](http://gilfind.uga.edu/)

**Research & Instruction** Professional librarians for all subject areas. Call 706.542.3251 or email [mainref@uga.edu](mailto:mainref@uga.edu).

**[libs.uga.edu](http://libs.uga.edu)**  
**706.542.3256**  
**[maincirc@uga.edu](mailto:maincirc@uga.edu)**



## International collaboration is not just for students

- \* At UGA, internationally co-authored faculty papers have a 28% higher category normalized citation impact score (2007–2016)
- \* International research collaboration is highly relevant to “Grand Challenge” and other high-impact topics
- \* Significant sources of external funding are available, including programs from NIH Fogarty, NSF, Department of State, USAID, and Department of Education.

## Seed Funding is Available to Launch your International Research

- \* Global Research Collaboration Grants (up to \$8,000) are offered twice annually. [http://research.uga.edu/docs/forms/iga/GRCG\\_Guidelines.pdf](http://research.uga.edu/docs/forms/iga/GRCG_Guidelines.pdf)
- \* Department of State Fulbright Scholar program offers hundreds of awards each year to support faculty research and teaching abroad. <https://www.cies.org/>
- \* Dedicated seed funding with strategic partners at the University of Liverpool and the state of Minas Gerais, Brazil. <https://web.oie.uga.edu/liverpool/index.php/seed-grant-program>

## Visit the Office of International Education funding page and stay informed about:

- \* International funding opportunities
- \* On-campus global events including Fulbright proposal development workshops
- \* Grant writing tips and tools

*Sign up for our targeted international Faculty Funding Note listserv* which features monthly grants notification emails personalized toward your international research and teaching interests. <http://international.uga.edu/faculty-and-staff>

### Contact:

Brian Watkins  
Director of International Initiatives  
[brianw@uga.edu](mailto:brianw@uga.edu)

Lauren E. McLennan  
Grants & Projects Coordinator  
[mclennan@uga.edu](mailto:mclennan@uga.edu)





# UNIVERSITY OF GEORGIA RESEARCH CORE FACILITIES

[research.uga.edu/core-facilities](https://research.uga.edu/core-facilities)

University of Georgia Core Facilities provide state-of-the-art equipment and services to researchers at UGA, other universities, government agencies, nonprofit organizations and industry. These facilities make use of highly specialized scientific equipment, diagnostic tools, adaptable prototyping processes and mechanical production shops.

## Animal Health Resource Center

A safe, secure, state-of-the-art facility that enables scientists to study infectious microorganisms, parasites and toxins in an environment that is safe for researchers, animals and the public. One of the most technologically advanced biocontainment facilities in the United States, dedicated to studying infectious diseases that affect both animal and human health.

[vet.uga.edu/ahrc](https://vet.uga.edu/ahrc)

## Bioexpression & Fermentation Facility

Maintains an array of equipment to speed the pace of research, development and manufacturing. Areas of expertise include molecular biology, fermentation, protein purification, high-containment cell culture and monoclonal antibodies.

[bff.uga.edu](https://bff.uga.edu)

## Bio-Imaging Research Center

A multi-imaging suite designed to provide a full range of biological tissue imaging technologies, including a large-bore 3T scanner, a small-bore 7T scanner, an MR acclimation setup and a research and development team. The electrophysiology suite houses multiple functional brain imaging technologies such as dense array EEG and an integrated MEG/EEG system. Basic phlebotomy service is also available.

[birc.uga.edu](https://birc.uga.edu)

## Biomedical Microscopy Core

Houses state-of-the-art deconvolution, confocal, super-resolution and light sheet fluorescence microscope systems useful for multiple applications, including live-cell imaging, high content analysis and examination of fixed and immunolabeled cell and tissue samples. The facility provides expertise, training and assistance to researchers who work on different model organisms.

[bmc.uga.edu](https://bmc.uga.edu)

## Center for Applied Isotope Studies

Provides accelerator-based radiocarbon measurements and stable isotope, X-ray fluorescence and inductively coupled plasma mass spectrometry analyses. The center has an established reputation as a pioneer in development and application of analytical techniques, as a premier analytical laboratory, and as a technical training center.

[cais.uga.edu](https://cais.uga.edu)

## Center for Tropical & Emerging Global Diseases Cytometry Shared Resource Laboratory

Provides access to and training for three flow analyzers with capabilities ranging from four-color to nine-color analysis as well as a Luminex multiplexing instrument. Two cell sorters – one user-operated S3 cell sorter (Bio-Rad) and one facility operated MoFlo XDP (Beckman Coulter) – also are available. Staff offer expert advice and consultation for the design and analysis of experiments.

[ctegdcytometry.uga.edu](https://ctegdcytometry.uga.edu)

## Clinical and Translational Research Unit & Georgia CTSA

Supports investigators conducting clinical and translational studies that advance the understanding, prevention and treatment of human disease. For students and health sciences trainees, the unit provides opportunities to learn how laboratory discoveries are translated into improved patient outcomes.

[ctru.uga.edu](https://ctru.uga.edu) / [georgiactsa.org](https://georgiactsa.org)

## Comparative Pathology Laboratory

Provides expert diagnostic and research pathology services to investigators using laboratory animals. Gross pathology, histopathology, immunohistochemistry, electron microscopy, clinical pathology services and phenotyping of genetically modified animals. Genetically modified mouse lines are available for cancer research.

[vet.uga.edu/pathology/service-lab/comparative-pathology-laboratory](https://vet.uga.edu/pathology/service-lab/comparative-pathology-laboratory)



### Complex Carbohydrate Research Center Analytical Services

Offers analytical services for structural characterization of polysaccharides, proteins and glycolipids derived from animal, plant or microbial origin. Includes state-of-the-art mass spectrometry and NMR spectroscopy to determine molecular structures of carbohydrates and proteins and to investigate protein-carbohydrate interactions. Also offers hands-on training courses in analytical techniques used to study complex carbohydrates.

[ast.uga.edu](http://ast.uga.edu)

### Georgia Advanced Computing Resource Center

Provides high-performance computing and networking infrastructure; a comprehensive collection of scientific, engineering and business applications; and consulting and training services. GACRC specializes in Linux/UNIX system administration, storage administration, computational computing, virtualization and database administration.

[gacrc.uga.edu](http://gacrc.uga.edu)

### Georgia Electron Microscopy

Provides application of electron microscopy and related analytical methods for diverse research areas including biology, biomedical sciences, plant biology, geology, chemistry, textiles, archaeology, engineering, physics and nanotechnology/materials analysis.

[gem.uga.edu](http://gem.uga.edu)

### Georgia Genomics and Bioinformatics Core

UGA's core laboratory for nucleic acid sequencing and bioinformatics. Services encompass the range of genomic techniques, applications and sequencing technologies, as well as bioinformatics consultation on experimental design, selection of the appropriate sequencing platforms, and bioinformatics analyses.

[dna.uga.edu](http://dna.uga.edu)

### Instrument Design and Fabrication Shop

Designs, fabricates, repairs or modifies new or existing equipment and machinery.

[research.uga.edu/idfs](http://research.uga.edu/idfs)

### Integrated Bioscience and Nanotechnology Cleanroom

A 2,200-square-foot (Phase I) Class 100/1,000 part and a 1,000-square-foot (Phase II) Class 10,000 part. This is a multidisciplinary, nanotechnology-focused fabrication, characterization and manipulation facility.

[cleanroom.uga.edu](http://cleanroom.uga.edu)

### Proteomic and Mass Spectrometry

Equipped with a ThermoScientific Orbitrap Elite mass spectrometer for high-resolution and high-mass accuracy analysis; nano HPLC to analyze more complex protein mixtures; and a Bruker Autoflex MALDI for quick analysis of tryptic digests of pure proteins in solution or via in-gel digestion. An in-house version of Mascot for protein identification using researches proprietary or unique databases is available. Facility has other mass spectrometers for sample analysis.

[pams.uga.edu](http://pams.uga.edu)

### Scientific Glass Blowing Shop

Creates a variety of standard and one-of-a-kind glass items and modifies commercial glassware.

[research.uga.edu/glass](http://research.uga.edu/glass)

### Statistical Consulting Center

Provides statistical consultation and collaboration. The SCC's faculty and students provide expert statistical assistance in all stages of quantitative research, from proposal and study design through programming and interpretation of results.

[stat.uga.edu/consulting](http://stat.uga.edu/consulting)

### GRA Partner Core Facilities

UGA faculty also have access to certain core facilities in the Georgia Research Alliance at the same cost and terms offered to the participating institution's faculty.

Contact the GRA member institutions below about participating facilities and rates and for more information.

- Augusta University
- Clark Atlanta University
- Emory University
- Mercer University
- Morehouse School of Medicine
- Georgia Institute of Technology
- Georgia State University



## Core Facility Business Services

Office of Research

UNIVERSITY OF GEORGIA



<http://www.cores.emory.edu/>

#### **Biostatistics and Collaboration Core**

The Emory Biostatistics Collaboration Core (BCC) provides state-of-the-art statistical and bioinformatics analysis. Our mission is to collaborate with investigators to choose appropriate study design for quantitative analysis and to assure appropriate implementation of statistical methodology in research. BCC personnel are available for discussion at all stages of research, including: preparation of grants and contracts, database design and management; data mining and analysis of large, administrative datasets; bioinformatics needs; assistance in analyzing and presenting research data; and statistical review of manuscripts in the publication process. The BCC has access to a broad range of computer hardware and software and personnel with expertise in using major statistical, graphics, and data management packages. <http://www.cores.emory.edu/bcc/>

#### **Center for System Imaging Core**

The Center for System Imaging Core (CSIC) provides core services for human and animal imaging studies. The major imaging equipment housed at CSI includes a cyclotron/Radiochemistry lab, a 3T MRI system, a HRRT human brain PET system, an Inveon micro PET-CT system, and a multispectral fluorescence animal imaging system. <http://www.corelabs.emory.edu/csi/index.html>

#### **Emory Comprehensive Glycomics Core**

The Emory Comprehensive Glycomics Core provides state-of-the-art molecular interaction assay technologies and using surface plasmon resonance with a BiaCore X100, isothermal titration calorimetry with a MicroCAiAuto-iTC200, and glycan microarray analyses using a variety of glycan microarrays comprised of various classes of glycans. <http://www.cores.emory.edu/ecgc/index.html>

#### **Emory Flow Cytometry Core**

The Emory University School of Medicine Flow Cytometry Core (EFCC) provides state-of-the-art high-speed sorting, sample analysis and analyzer training facilities. Mission priority #1 is to provide the highest customer satisfaction to our clients. This Flow Cytometry Core Facility provides quantitative flow cytometric analyses on samples from a wide variety of biological matrices, e.g. blood, bone marrow, spleen, serum, plasma, solid tissues, cell extracts, etc., to support both clinical and basic research efforts on the campus and the surrounding area. <http://www.cores.emory.edu/fcc/index.html>

#### **Emory Gnotobiotic Animal Core**

The Emory Gnotobiotic Animal Core (EGAC) is the newest member of the Emory Integrated Core Facilities. This cutting-edge core facility offers investigators the opportunity to experimentally manipulate the microbiomes of mice in a controlled environment to gain insight into important biological mechanisms. The EGAC contains a number of 3' foot wide rigid isolators (Parkbio), each with the capacity to house 16 mice cages each. In addition, the facility has a Tecniplast ISOcageP Bioexclusion system. These are airtight individual mouse cages with high positive pressure that are specifically designed for cage-scale germ-free, gnotobiotic, and bioexclusion studies. <http://www.cores.emory.edu/egac/index.html>

#### **Emory Integrated Computational Core**

The Emory Integrated Computational Core (EICC) mission is to provide cutting-edge computational support to Emory researchers and users of users of other Emory Integrated Core Facilities. In effect, we act as the "digital hub" for all the Emory Integrated Core Facilities. Please contact us so that we can <http://www.cores.emory.edu/eicc/index.html>

#### **Emory Integrated Genomics Core**

The Emory Integrated Genomics Core's (EIGC) central mission is to help Emory investigators effectively use state-of-the-art genomics platforms in pursuit of their research goals. Our primary platforms use next-generation sequencing technologies to characterize genomes in order to use these data as tools of discovery. Services include whole genome single nucleotide polymorphism (SNP) genotyping, whole genome sequencing, structural variation detection, and 16S rDNA amplification and sequencing for microbiome studies. The EIGC also maintains CLIA certification, offering assay validation and nucleic acid extraction services from a wide variety of biological sources, including blood, serum, plasma, solid tissues, cell extracts, etc., to support both basic research and clinical efforts on campus. We can also help characterize and confirm the identify of cell lines, which is critical for scientific rigor and reproducibility. <http://www.cores.emory.edu/eigc/index.html>

#### **Emory Integrated Proteomics Core**

The Emory Integrated Proteomics Core (EIPC) is a full-service proteomics facility offering Emory researchers the ability to use the latest technologies to identify and characterize proteins in their research. <http://www.cores.emory.edu/eipc/index.html>



<http://www.cores.emory.edu/>

### **Emory Integrated Lipidomics Core**

The Emory University Lipidomics Core (EILC) Facility will provide quantitative lipidomics analyses on lipid samples from a wide variety of biological matrices, e.g. blood, serum, plasma, solid tissues, cell extracts, etc., to support both clinical and basic research efforts on campus. These analyses will provide insight on lipids and lipid precursors whose abundance can be monitored as biomarkers to predict and follow progression of a wide range of diseases.

<http://www.cores.emory.edu/eilc/index.html>

### **Emory Multiplexed Immunoassay Core**

The Emory Multiplexed Immunoassay Core (EMIC) help investigators use the latest multiplexed immunoassays in their research. We perform, analyze, and interpret multiplexed immunoassays to measure protein levels in biological matrices (plasma, serum, cerebrospinal fluid, milk, urine, stool, vaginal swabs, tissues, etc.) on the Meso Scale Discovery (MSD) platform.

<http://www.cores.emory.edu/emic/index.html>

### **Emory Personalized Immunotherapy Core**

The Emory Personalized Immunotherapy Core is located within the premises of Emory University Hospital Blood Bank. The core is a 300 ft<sup>2</sup> clinical-grade, fully equipped, high sterility isolation facility. It is designed as an enabling infrastructure to support early phase clinical trials of cell-based therapies where processing of human cell and tissue is required as part of a FDA-sponsored biopharmaceutical study. It is accredited by the Foundation for the Accreditation of Cellular Therapy (FACT) for more than minimally manipulated cellular therapy products. The facility is manned by a team of highly qualified personnel dedicated to the successful implementation and prosecution of cellular therapy clinical trials. The purpose of this designated Core facility is to directly support investigator-driven phase I/II cell therapy clinical trials at Emory. As a Core facility, EPIC provides a unique resource to the Emory community in assisting the translation of cellular therapies from the bench side to the clinic. The facility possesses the necessary infrastructure to manufacture cellular therapies under FDA approved good manufacturing practices (FDA cGMP Phase I guidance July 2008). This facility was designed to be nimble and adaptable and can support the manufacturing needs of most small enabling cell therapy clinical trials

<http://www.cores.emory.edu/epic/index.html>

### **Emory Stem Cell Core**

The Emory Stem Cell Core (ESCC) is one of the newest member of the Emory Integrated Core Facilities (EICF). The ESCC brings a powerful new research platform in support of Emory investigators. This core's focus and technical expertise will be to derive and characterize human induced pluripotent stem cells (iPSCs) from terminally differentiated somatic cells using non-integrating methods. Additionally, the core will provide training and educational resources to support investigators with interest in human stem cells. iPSCs generated from patients with a genetic defect allows for a unique opportunity to study the mechanisms of disease in an in vitro model. Other applications for these cells include developing a reporter line, drug screening and discovery, and potentially regenerative therapies. The core plans to interface with other members of the Emory Integrated Core Facilities as a pipeline to analyze patient cells that will inform drug discovery and personalized medicine.

<http://www.cores.emory.edu/escc/index.html>

### **Integrated Cellular Imaging Core**

The Integrated Cellular Imaging Core (ICIC) provides state-of-the-art light microscopy and image analysis technology. We offer confocal and live cell imaging, multi-photon animal and tissue imaging, widefield with deconvolution, super resolution, and image analysis. To effectively implement these technologies, we provide consultations, expert training, and support for all our systems. Along with providing access to equipment, another goal of ICI is to serve as a nucleator for the cell imaging community at Emory. We want to unite diverse microscopy interests, allowing investigators to share ideas, expertise, and instrumentation. Developing new imaging techniques and acquiring new cutting-edge equipment are central to our mission.

<http://www.cores.emory.edu/ici/index.html>

### **Rodent Behavioral Core**

The Emory University Rodent Behavioral Core (RBC) plans, executes, and analyzes behavioral experiments examining activity, arousal, coordinated movement, learning and memory, anxiety, depression, seizure susceptibility, reward/reinforcement, and aggression in mice and rats.

<http://www.cores.emory.edu/rbc/index.html>



<http://www.cores.emory.edu/>

### **Robert P. Apkarian Integrated Electron Microscopy Core**

The Robert P. Apkarian Integrated Electron Microscopy Core (IEMC) at Emory University provides electron microscopy (EM) training and services to academic, clinical, and industry users. The IEMC is located at two sites on the Emory University. Cherry L. Emerson Hall site provides services and training that include traditional transmission electron microscopy and cryo-electron tomography (Cryo-ET). The newly established Biochemistry Connector site provides services and training in single particle cryo electron microscopy (Cryo-EM). Instrumentation at Emory includes a ThermoFisher Talos Arctica 200 kV Field Emission TEM, a JEOL JEM- 2200FS 200 kV Field Emission TEM (equipped with hole-free phase-plate and a DE-20 direct electron detector), a ThermoFisher Talos 120 kV TEM, a JEOL JEM-1400 120 kV TEM, a Hitachi HT7700 120 kV TEM, and two Field Emission SEMs. Additional preparative equipment includes a ThermoFisher Vitrobot Mark IV, Gatan CP3, several plasma-cleaners and carbon evaporators, a Baltec HPM- 010 high-pressure freezer, a Leica cryo-ultramicrotome, and a Leica freeze substitution device. We have dedicated GPU and CPU clusters, and workstations for Cryo EM image processing and data storage.

<http://www.cores.emory.edu/iemc/>

### **Mouse Transgenic & Gene Targeting Core**

The Mouse Transgenic and Gene Targeting Core (TMF) provides state of the art equipment and expertise for generating and characterizing genetically altered mouse models. Our main technology platform uses CRISPR-CAS9. We also offer rederivation and cryopreservation services.

<http://www.cores.emory.edu/tmc/index.html>

### **High Performance Liquid Chromatography Bioanalytical Core**

The Emory HPLC Bioanalytical Core (HPLC), one of the Emory Integrated Core Facilities (EICF), is supported by the Department of Pharmacology, the Georgia Clinical & Translational Science Alliance, and the Emory University School of Medicine. The HPLC Bioanalytical Core measures monoamine neurotransmitters, amino acids neurotransmitters and purines using HPLC methods to support research efforts within and outside of Emory.

<http://www.cores.emory.edu/hplc/index.html>