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ChemIDP is an Individual Development Plan designed specifically for graduate students and postdoctoral scholars in the chemical sciences. Through immersive, self-paced activities, users explore potential careers, determine specific skills needed for success, and develop plans to achieve professional goals. ChemIDP tracks user progress and input, providing tips and strategies to complete goals and guide career exploration.

https://chemidp.acs.org

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Career Consultant Directory





- ACS Member-exclusive program that allows you to arrange a one-on-one appointment with a certified ACS Career Consultant.
- Consultants provide personalized career advice to ACS Members.
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ACS Scholar Adunoluwa Obisesan

BS, Massachusetts Institute of Technology, June 2021 (Chemical-biological Engineering, Computer Science & Molecular Biology)



"The ACS Scholars Program provided me with monetary support as well as a valuable network of peers and mentors who have transformed my life and will help me in my future endeavors. The program enabled me to achieve more than I could have ever dreamed. Thank you so much!"

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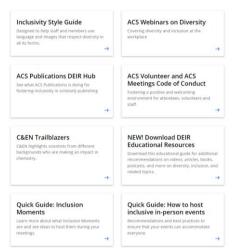


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ACS OFFICE OF DEIR

Advancing ACS' Core Value of Diversity, Equity, Inclusion and Respect

Resources





Diversity, Equity, Inclusion, and Respect

**Adapted from definitions from the Ford Foundation Center for Social Justice:

Equity**

sees to ensure fair treatment, equality of opportunity, and fairness in access to information and resources for all. We believe this is only possible in an environment built on respect and dignity. Equity requires the identification and elimination of barriers that have prevented the full participation of some groups.

Diversity**

The representation of varied identities and differences (race, ethnicity, gender, disability, sexual orientation, gender identity, national origin, tribe, caste, socio-economic status, thinking and communication styles, etc.). collectively and as individuals. ACS seeks to proactively engage, understand, and draw on a variety of prescribed.

Inclusion**

Builds a culture of belonging by actively inviting the contribution and participation of all people. Every person's voice adds value, and ACS strives to create balance. In the face of power differences, in addition, no one person can or should be called upon to represen

Respect

Ensures that each person is treated with professionalism, integrity, and ethics underpinning all interpersonal interactions.

https://www.acs.org/diversity

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https://www.youtube.com/c/ACSReactions/videos



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Sam Jones, PhD Science Writer & Exec Producer



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https://www.acs.org/careerconsulting.html

Personal Career Consultations



https://www.acs.org/careerconsulting.html



https://www.acs.org/linkedInlearning

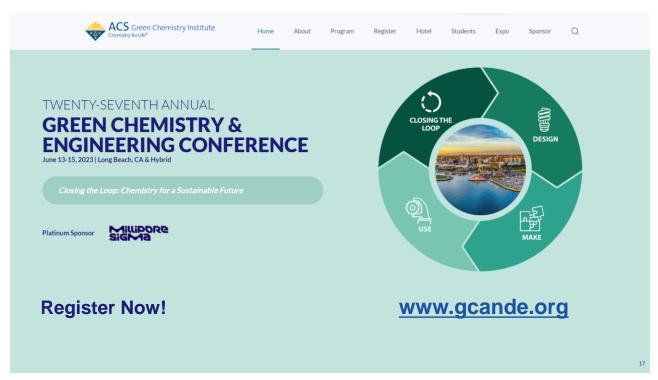
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Wednesday, August 2, 2023 | 2-3pm ET

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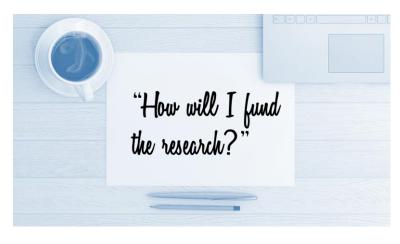
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The Greatest Pragmatic Question in All Science is...





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The Two Essential Elements of a Successful Grant Application



- A Great Research Idea
- Effective Presentation of the Idea





The Keys to Converting the Elements into a Successful Proposal

- Thorough Planning
- Careful Organization





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Outline of Topics

- ☐ Proposal Writing Rules
- Funding Sources and Agency Information
- Planning the Proposal
- Proposal Tips
- ☐ Final Thoughts





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#6: Demonstrate Managerial Skills



- Set forth a clear pragmatic research plan
- Show wise use of resources people, money, and facilities
- Be well organized





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#5: Know the Agency's Mission

- Every funding agency has ideas and rules about what it wants to fund.
- A proposal for one agency typically is not suitable to send to other agencies, because the overall goals are different.
- Don't attempt to contort the agency's mission to fit your research project.





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#4: Read All Instructions Carefully

Be sure to follow the instructions.

A Common Reviewer's View:

If the PI can't follow instructions for the proposal, then the PI probably can't follow instructions to do elaborate research.





#3: Write with Confidence, But Don't Disregard Other Ideas

- Do a thorough Literature Search and address all relevant literature
- Convey the attitude that you have identified an important problem, and you are the right person to do the work and find the answers.





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#2: Have A Great Scientific Idea

One that is novel, has relevance to an identified target and can be investigated thoroughly, within the context of the institutional resources available to the PI, and within a reasonable time-frame.

 Novelty often derives from detailed study or observation and understanding of a problem or challenge.





#1: If in Doubt, Contact the Program Officer

Preferably, **before** you spend the time writing an uncompetitive or non-compliant proposal.

- Contact by phone or email
- Always be polite, respectful, and honest when communicating with a program officer





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Funding Resources



ACS PRF

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Finding the Right Agency



Make sure that your research fits the mission of the funding agency!





Information on Federal Grants

Federal funding sources, and application procedures at "grants.gov":























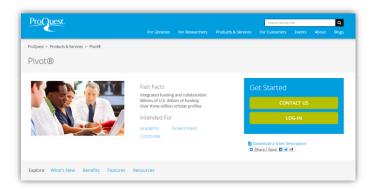
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Information on Other Funding Sources

PIVOT – Web based subscription service with extensive information on funding sources.



http://www.proquest.com/products-services/Pivot.html











General Internet Searches





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Information on other Funding

Funding sources available for Students and Post Docs

www.acs.org/GradFunding







Agency Information



- Read the Request For Proposals (RFP) or the "Grant Proposal Guide."
- Believe and follow the instructions.
- Read them for **what they say**, not what you want them to say.
- Your chosen agency should not be the sole source of funding.





Agency Concerns

- Are you eligible to apply,
- Are you qualified to do the research?





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What skills are needed to accomplish the task?

- What skills can be reasonably learned?
- What tasks are best accomplished by someone who already has specific expertise or training?

Who is going to be a part of the research team?

- Undergraduate students?
- · Graduate students?
- Post Docs?
- · Collaborators?
- Co-PI?
- Instrumentation Service Centers?

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Questions to Answer in Planning the Work

What Equipment is need for the Research?

- Do you have access to the necessary equipment?
- Are funds needed for acquisition of equipment?
- If not readily available, can the equipment be reasonably accessed at another facility?
- Have you made specific arrangements for using equipment at another facility? (Do you have a written document verifying that you have access to this equipment?)

What are the safety concerns?

- Is general safety training and supervision adequate?
- Is special safety training needed?
- Is special safety equipment needed?
- Is special supervision needed?

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Questions to Answer in Planning the Work

What factors impact how much time will be required to do the research?

- How much time will be required to accomplish each phase of the research?
- Which activities of the research can be conducted in parallel, and which must be done sequentially?
- What are the contingency plans if the initial plans don't work out as expected?

What is your Budget?

- Does your budget make sense? (Are you asking for what is needed?)
- Does your budget have adequate funding to support the proposed work?
- Can you articulate a reasonable justification for your budget?
- Does your budget comply with the funding agency's budget requirements?

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Questions to Answer in Planning the Work

Do your plans meet the funding agency's secondary goals?

These may include expectations of mentoring plans or statements regarding diversity.

Have you established contact with your institution's grant office?

- Does your proposed research comply with your institution's requirements/guidelines?
- What do you have to provide to your institution's grant office?
- What is the timeline for getting these materials to the grant office for a timely filing of the proposal.
 - · Rushing is "deadly"
 - Consider "reverse engineering" the timeline for preparing your proposal

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Questions to Answer in Planning the Work

Have you identified individuals that can provide feedback about the proposal?

- Which feedback do you need? (research concepts, language)
- Who has the expertise you are looking for?
- Have feedback providers budgeted time for reviewing your proposal?

Now that you have an idea...



...how do you go about writing the proposal?



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Organizing Your Proposal

- · Identify all the component pieces need for your proposal submission
- Make a list of the component pieces which may include:
 - An application form
 - A narrative describing the proposed research
 - · Letters from collaborators
 - Preliminary results data
 - Bibliography
 - Biographical information
 - · Ancillary documentation requested by funding agency
 - Any institution specific required documentation
 - · Make an outline

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Proposal Tips

- ✓ Write to be readable.
- ✓ Define terms and avoid "jargon"
- ✓ Make the level of detail appropriate.
- ✓ Find out how much money is available and follow the budget guidelines.
- ✓ Have clearly defined hypotheses, goals, and approaches.





Proposal Tips

- ✓ Use table and figures effectively
- ✓ Avoid plagiarism including self plagiarism
- ✓ Review bibliography required form, age of references, number of research groups cited
- ✓ TYographiKal eRros are a biG Pr0blem





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Proposal Tips

Leverage your network

- connect with colleagues at similar institutions with successful proposals

What are the grant application support resources at your institution?

- mock study sections
- proofreading

Set a realistic timeline

- consider your existing commitments
- consider time needed to receive and implement feedback

Care in proposal writing/preparation results in a higher quality presentation

- Identify trusted proofreaders/internal reviewers early in the process





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Feedback and Next Steps



Nothing but net

My proposal has been funded!

- Look for constructive reviewer feedback
- Post-award management

Rebound the shot

Not recommended for funding - what do I do next?

- Look for constructive reviewer feedback
- Use the feedback to inform
 - resubmission,
 - a new proposal idea / new funding agency, and/or
 - your research project trajectory



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Rejection

Rejected Proposals are Inevitable

- Don't be overcome by emotions
- Get Feedback
- Mind the details

Failed funding applications are inevitable, but perseverance can pay dividends. By James Mitchell Crow

the day after she submitted a grant proposal last November, Sarah McNaughton listed all the tactics she could think of to boost her chances of success next time. "I expect to be of, 'says McNaughton." It is the excep-get funded, not the rule." Publishing key

food choices in real life, so she can determine how those vary depending on a person's nutrition knowledge and cooking skills. After McNaughton had sent off her grant application to Australia's National Health and Medical Research Council (NHMRC), top of her to do list was blaunching a pilot study. If we can show that people will wear the cameras, and they capture the data we need, that would really strengthen the application,' she says.

Article: "After the Fall: What to Do when your Grant is Rejected" Nature, February 20, 2020 Vol578, p 477—479.

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One Way to Learn About Grant Proposals:



- No better way to see how the system works.
- Not a major time commitment.
- Web-based free training with focus on publication reviews at: acsreviewerlab.org





ACS Office of Research Grants: Additional Resources

Dr. Joerg Schlatterer

Director

j_schlatterer@acs.org

Dr. Nancy Jensen

Assistant Director / Organic & Inorganic Program Officer n_jensen@acs.org



ACS Petroleum Research Fund

www.acsprf.org
Inquiries: prfinfo@acs.org

Additional Contact Information



Dean Dunn: d_dunn@acs.org
Geochemistry, Geology, geophysics



Polymer Science and Chemical and Petroleum Engineering



Askar Fahr: a fahr@acs.org

Physical Organic Chemistry and Physical Chemistry/Chemical Physics

Burt Lee: <u>b lee@acs.org</u>
 Surface and Materials Science



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