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## **Research Collaboration Best Practices**

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# RESEARCH COLLABORATION BEST PRACTICES

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## WHAT ARE SOME OF THE CHALLENGES TO COLLABORATION?

**Time** is a critical resource necessary to creating new collaborations. Faculty members need opportunities to interact, informally as well as formally, to develop ideas, and work well together. Developing shared language is especially necessary for interdisciplinary collaborations.

**Equity** can be challenging; collaborations may appear “predatory,” with unequal involvement in the research, or unfair recognition of time and effort in PI/co-PI roles or in authorship. Collaborations should fairly credit researchers for the work they do, regardless of rank, gender, race, etc.

**Inclusion** is another key approach. This matters both in collaborators treating each other’s insights with respect, and identifying the contributions diverse collaborators can make. Intellectual and demographic diversity is likely to lead to greater creativity and insight.

**Good communication and trust** characterize the most successful research teams. While funding opportunities sometimes require developing new collaborations speedily, teams that have already developed strategies for working together effectively are more likely to win funding.

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## HOW CAN FACULTY MEMBERS DEVELOP FAIR AND EQUITABLE COLLABORATIONS?

Have clear conversations about expectations, roles, and responsibilities. Teams must articulate a fair and equitable distribution of resources, workload, and credit. Senior team members should ensure that junior scholars’ work is recognized, based on their expertise or the collaboration’s structure.

Collaborators should discuss whose skills are needed at different stages of the project, who from the team might be the PI or co-PI on any grant proposals, and strategies for authorship on the papers that emanate from the project. While these conversations can be awkward, aligning expectations early in the collaboration ensures that there are no misunderstandings.

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One of the key challenges to collaborations is time; every member of the team may have different priorities and time constraints at different points in the collaboration. Therefore, discussing timelines for the research, even if those timelines may need to be adjusted later, is important.

Some collaborators develop Memorandums of Understanding, written documents laying out expectations for contributions to writing proposals or papers, carrying out research, access to instruments, and other details. These MOUs should be updated as the project evolves. MOUs developed before submitting a grant proposal almost always need to be adjusted once the research is funded.

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## WHAT SHOULD FACULTY MEMBERS CONSIDER BEFORE JOINING COLLABORATIONS?

Collaborations can increase opportunities and productivity, but they can also be demanding. Faculty members should consider some principles before committing to a collaboration.

First, how does this opportunity move their research agenda forward? How does it move them toward specific goals? This might be related to substantive content, methodological expertise, or connections to new research partners.

Second, how does this project fit into their professional development goals and research narrative (for example, on a personal statement)? Pre-tenure faculty members should be selective, only engaging in collaborations that clearly fit into their research agenda and help establish their research strengths. Faculty may pursue some

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collaborations immediately, and others at a later stage or not at all.

Third, what resources are necessary to engage in this collaboration effectively? If resources are not in place, the collaboration is less likely to be effective. Leading a large research team, for example, may require reducing other responsibilities or asking for administrative support.

Finally, what input will they have regarding intellectual direction and production for the team? When considering collaborating with a senior researcher, it can be useful to consider their record collaborating with others, even talking to former collaborators. These conversations should not replace conversations among the research team about how *this* collaboration will be structured.

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## HOW CAN FACULTY MEMBERS BEST INDICATE THEIR ROLE?

How collaborations are counted in personnel processes differs not only by college, but also by department and subfield. There is no clear formula. Thus, it is important to consult multiple trusted colleagues, including Chairs/Heads and members of Personnel Committees, to determine how collaborative work is counted, and how to structure collaborative work to support career goals.

Departments should also discuss how collaborations are evaluated; these discussions can be incorporated into bylaws or “cultural standards” statements. Mentors should proactively discuss how collaborations are counted with mentees.

Faculty should strive to make their role in collaborations clear. This may be through identifying their particular expertise on the project team, or the through-line across their research agenda. Senior collaborators can also help by highlighting and promoting the expertise that junior colleagues bring to research teams. Authors or collaborators should identify their specific contributions as a member of the research team in papers or personal statements as part of a personnel case.

- PNAS requires authors to identify author contributions to designing research, performing research, contributing new reagents or analytic tools, analyzing data, or writing papers (McNutt et al., 2018).
- The CRediT ([Contributor Roles Taxonomy](#)) lists fourteen different contributions that can be adopted in writing research narratives, or in research products themselves.

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## WHAT RESOURCES EXIST FOR COLLABORATION?

- The National Cancer Institute’s [Team Science Toolkit](#) provides many excellent resources for collaboration. See also the National Research Council’s publication on [Team Science](#).
- Mutual mentoring groups funded through [ADVANCE](#), the [Office of Faculty Development](#).
- Networking events bring faculty members together to discuss research and connect over shared interests. These are organized by [ADVANCE](#), Centers or Institutes, the [Office of Research Development](#), or Associate Deans for Research.
- Interdisciplinary scholar programs, such as through the [Center for Research on Families](#), the [Institute for Social Science Research](#), the [Institute of Diversity Sciences](#), the [Institute for Applied Life Sciences](#) or the [Interdisciplinary Studies Institute](#) help faculty members connect.
- Seed grants, provided by [ADVANCE](#), institutes and centers, the Provost’s office, Deans, or the Vice Chancellor for Research & Engagement.

*This tool is based on presentations and suggestions made by Julia Melkers of Georgia Tech, and Erin Baker, Alexandra Meliou, Barbara Osborne, Mark Pachucki, Maureen Perry Jenkins, and Sarah Fefer, all of the University of Massachusetts, Amherst.*

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