

# Mentor and Mentee Responsibilities and Collaborative Research

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# Housekeeping

## Zoom Etiquette:

- Silence personal devices.
- Stay muted when not talking.
- Set up in a quiet location.
- Remain attentive. Avoid checking email/phone/web.
- Use the Chat function to ask questions or get technical help.
- Use your full name, not an alias.

## Receiving credit for attendance:

To satisfy the [NIH Requirement for Instruction in the Responsible Conduct of Research](#), the following are required in order to receive credit for attendance:



**Attend the full 90 minutes of the training.** Attending any 8 out of the 9 RCR seminars we offer will satisfy the NIH requirement.



**Keep your video camera on throughout the session.** NIH requirements for RCR training specify face-to-face discussion.

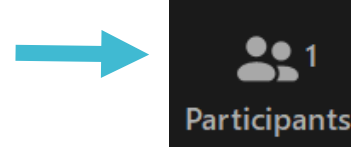


**Participate interactively throughout the session.** Participate in discussions, respond to polls, and sign the attendance sheet (link will be distributed in the Chat).

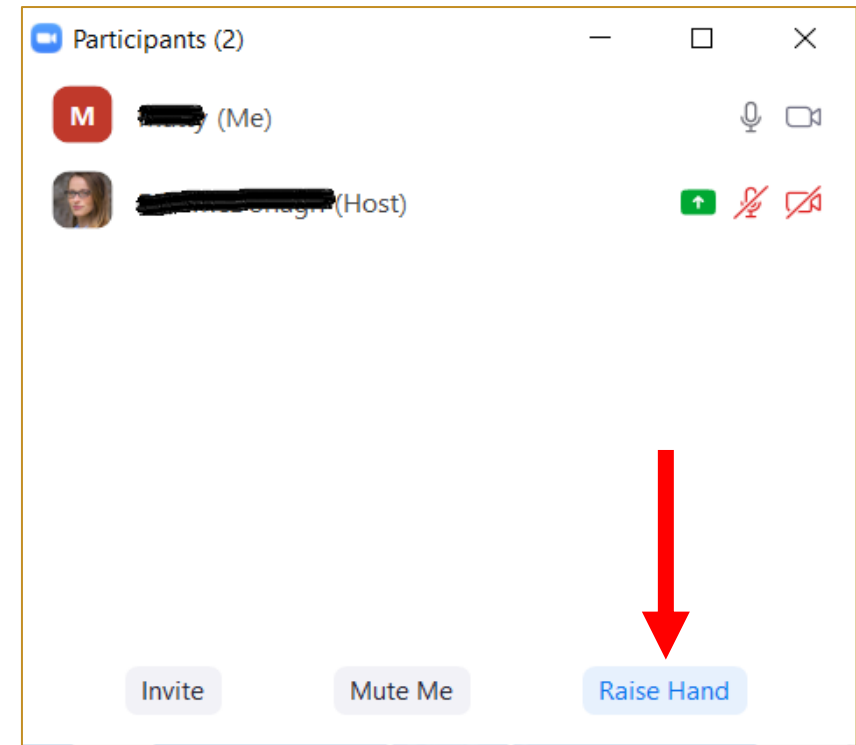
# Raise your Hand to participate in discussions

In order to participate in discussions, raise your hand.  
**Try it now!**

- Click the "Participants" button at the bottom of your screen.



- Click "Raise Hand" in the popup window.



- Click "Lower Hand" to stop raising your hand.

# Poll Questions

1. Select your primary University position or affiliation: (Single Choice)
  - PI/Faculty
  - PRA/Researcher
  - Study Coordinator
  - Regulatory/Admin Support
  - Student/Trainee/Post doc
  - Other
1. How many hours do you spend on Zoom in a typical day? (Single Choice)
  - Less than 1 hour
  - 1-2 hours
  - 3-4 hours
  - More than 4 hours
1. If you had the option, how would you prefer to attend RCR classes?
  - In person (e.g., on campus in an auditorium)
  - Online (e.g., Zoom)

# Objectives

- Describe mentor and mentee expectations
- Identify key characteristics to look for in a good mentor
- Mentoring across differences
- Recognize issues that commonly arise in mentor-mentee relationships that involve communication, alignment of expectations, and independence
- Identify potential strategies to enhance a mentor-mentee relationship

## Poll Questions:

1. I am a:

- Mentor
- Mentee
- Peer Mentor
- All of the above

2. Most of my mentoring is done through?

- In-person meetings
- Zoom meetings
- Group meetings
- All of the above

3. How frequently do you meet as mentor-mentee dyad?

- More than once per week
- Once a week
- 2-3 times per month
- None of the above

# Why do we need a mentor(s)?

Learn by watching.

Strive to become like our “role model”

Have someone to talk to who will understand.

Find useful advice when it is most needed.







# Benefits of Mentoring

## **Advance your research**

- Fresh perspective
- Learn from another scientist you share similar interests and will interact frequently and perhaps for years to come

## **Learn and refine leadership skills**

**Satisfaction** in contributing to the next generation



What  
expectations  
exist for  
mentor(s)?

5

WAYS SUPERVISORS  
CAN PROMOTE  
RESEARCH INTEGRITY

Are you a principal investigator, research coordinator, academic advisor, or mentor?  
Roles such as these place you in a unique position to cultivate exceptional research practices among the next generation of researchers.



1

BE AVAILABLE &  
APPROACHABLE



Your team wants to learn from YOU!

2

REVIEW RAW DATA



You are responsible for the integrity of your team's data.

3

COMMUNICATE EXPECTATIONS

Prevent misunderstandings by making sure everyone is on the same page.

4

PROVIDE TRAINING and GUIDANCE



Avoid making assumptions about anyone's skills or knowledge.

5

KNOW YOUR RESEARCH INTEGRITY OFFICER



Be prepared in case you ever suspect research misconduct.

## What expectations exist for mentor(s)?

- Teaching and **role modeling** the appropriate and ethical behavior
- Advocate for mentee
- Insisting on completion of projects
- Assisting with networking
- Seeking funding
- **Teaching** mentees responsible conduct of research

# What expectations exist for mentor(s)?

- Be available: Meet **regularly and frequently** with the mentee, particularly early in the mentor/mentee relationship
  - One hourly meeting per week- develop a schedule
  - Less frequent as time progresses
  - Establish best format for meetings early on and style of communications
- Mentor and mentee develop **clearly delineated goals**, expectations, and benchmarks: Career Development Plan
  - Mentor will attend meetings and seminars when the mentee presents
  - Mentor will help mentee with construction of grant application, manuscripts
- Content of exchanges between mentor and mentee are subject to the expectations of **professional confidentiality**

## What expectations exist for the mentee?

- Mentee has **primary responsibility** for the development of his/her own career.
- Mentor and mentee develop **clearly delineated goals**, expectations, and benchmarks: Career Development Plan.
- Holds the **mentor accountable** for various details of the relationship.
- Develop a **mutually defined research project** with the mentor, to include well-defined goals and timelines.
- Mentee should perform research activities **conscientiously** and maintain good research records and respect all **ethical standards** when conducting research.

## What expectations exist for the mentee?

- **Show respect** for, and work collegially with, co-workers.
- When in doubt, **ASK**
- **Assume progressive responsibility** and management of research projects.
- Seek **regular feedback** on performance and ask for/obtain regular formal evaluations. Be willing to hear criticism.
- Commit appropriate **time and effort**.

*The mentee is the driver of the relationship!*

# Mentoring Across Differences

- Many types of differences matter in a mentoring relationship
- Recognize and identify assumptions
  - Be willing to explore implicit and explicit assumptions about ethnicity, race, gender, age, sexual orientation and other areas of identity that influence mentoring relationships
    - Influence mentoring relationships
    - Affect decision-making
    - Alter opportunities
- Consider identity similarities and identity differences, and how the assumptions made by both mentor and mentee may affect the relationship
- Acknowledge and discuss specific identity assumptions about each other (both mentor and mentee)

## Mentoring Across Differences

- What are benefits when mentor and mentee **share** a specific characteristic?
- What are benefits when mentor and mentee are **different** according to a specific characteristic?



# Mentoring Across Differences

- Create an environment that invites and promotes open discussion about differences.
  - Make differences discussable
  - Recognize perception of differences and expectations
  - Ways to bring differences to the forefront and make them discussable:
    - Open a dialogue using a statement such as, “Research shows that racial and other differences affect both the mentee and the mentor. Do you think there are examples of this in our relationship?”
    - Move from the impact of differences on the relationship to impact on the team and organizational dynamic.
    - Utilize *appreciative inquiry* –the process of posing questions that generate positive awareness rather than focusing on the challenges of differences.
- Mentors should facilitate talking openly and inviting discussion about differences.
  - Differences are not only a mentee issue
  - Create a safe space
  - Acknowledge one’s own identities and experiences with differences

# Mentoring Across Differences: Resources

- Brigham and Women's Hospital Mentoring Curriculum  
<https://bwhmentoringtoolkit.partners.org/mentoring-across-differences-race-culture-gender-generation/cases-cross-racial-and-cultural-differences/>
- Osman NY, Gottlieb B. Mentoring Across Differences. *MedEdPORTAL*. 2018;14:10743. Published 2018 Aug 24. doi:10.15766/mep\_2374-8265.10743
- **Optional – If you would like to explore implicit and explicit assumptions that influence mentoring relationships, consider exploring Dr. Mahzarin Banaji's work on implicit bias**
  - <https://implicit.harvard.edu/implicit/>

## Poll Question:

- What characteristic is most important to you when selecting a mentor?
  - Expertise in area
  - Ability to provide funding for me
  - Access to expansive network
  - Great reviews by previous mentors

How do I  
choose a  
mentor?

Am I a good  
mentor?



Key features in  
a mentor:  
*Short list of  
considerations*

- **Unselfish:** Will the mentor share ideas?
- **Integrity:** Is the mentor trustworthy?
- **Funding:** Is the mentor able to provide financial support? Or Can we find it?
- **Seniority:** Mentored others successfully?
- **Initial Project:**
  - Is it feasible? Is the project publishable almost no matter what?
  - Is there a back-up plan?
- **Career Development:**
  - Well-defined career path *distinct* from the mentor?
  - Will the mentor help you to avoid “career distractors”

Am I ready to  
be a mentor?

*What mentees  
are looking for*

- Do you have
  - **time** to serve as a mentor?
  - **funding** and the **infrastructure** to support research?
  - a research project for the mentee to perform **differentiated** enough from mentor's research?
  - skills and experience in successful mentoring (What is your track record?)

# What about having more than one mentor?

- Great idea!
- **Someone needs to assume ultimate responsibility for the mentee**
- All mentors have to work well together and have clearly delineated roles, **avoid OVERMENTORING!**
- Different models of co-mentoring exist
  - Junior-Senior mentors
  - Mentors with different skill sets (Clinical and basic scientists)

# Six Core Competencies for Trainees

## 1. Discipline-specific **conceptual knowledge**

1. Understanding of the science

## 2. **Research skill** development

1. Day to day skills needed to perform the research

## 3. **Communication** skills

1. How to write scientifically
2. How to give an oral presentation

## 4. **Professionalism**

1. How to deal with rejection
2. How to be persistent

## 5. **Leadership and** **management** skills

1. How to work with others
2. How to get the most out of the environment

## 6. **Responsible conduct of** **research**

1. Learn the principles, rules, regulations, and requirements of research



## Demonstrate Ethical Behavior in Mentee- Mentor Relationship

- Acknowledge skills and experiences that each bring to the mentee-mentor relationship.
- Avoid paternalism or maternalism.
- Support and appreciate accomplishments.
- Avoid abuse of power (including exploitation and assuming credit for another's work).
- Be alert to ethical issues and challenges.
- Avoid conflicts of interest.
- Avoid political and personal biases.
- Agree on and abide by rules of authorship.

# Elements of Responsible Conduct of Research

- Commit to intellectual honesty.
- Accurately represent an individual's contribution to research.
- Follow governmental and institutional rules, regulations, and policies.
- Avoid conflicts of interest (avoiding financial and other influences).

## Attendance, Case Scenarios, & Discussion

Sign the **Attendance Sheet** now by clicking the link in the Chat.

Reminder: To participate in discussions, raise your hand.

- Click “**Participants**” at the bottom of your screen.
- Click “**Raise Hand**” in the pop-up window (click “Lower Hand” when done).

# Choosing a Mentor: An example

- Alex Stellar, MD, PhD
- Harriet Jung, MD
- Jeffrey Parfait, PhD

# Strategy to Approach Potential Mentors

- Talk to the mentor's present and past trainees to get a sense of track record
- Interview mentors:
  - Do you have the time to serve as my mentor?
  - Do you have the funding and the infrastructure to support my research?
  - Is the research project I would perform differentiated enough from your active research?



# Mentor #1: Alex Stellar MD, PhD

- Professor of Medicine in your department; International reputation /numerous accolades in your field of research
- PI : 2 Ro1s and a P50 grant; leads a well-equipped laboratory (all men):
  - 2 post-doctoral PhDs; 3 laboratory assistants
  - 2 graduate students; 1 post-doctoral MD fellow
- In the past 10 years: lead or first author on 75 peer-reviewed publications
  - Top-tier journals that have significantly impacted the field
- His prior trainees report:
  - Extremely intelligent, driven, expects excellence from his laboratory members, with a bit of a quick temper
- You have attended his seminars and find him to be an excellent speaker who easily engages the audience

## Dr. Stellar as Mentor: what might affect his mentoring practices?

- “International reputation” = much travel, less time on campus
  - How will he communicate with you?
  - Will he review your grants/manuscripts in a timely fashion?
- Lack of “middle authorship” on important papers (lack of collaborative spirit?)
- Features of the laboratory
  - Numerous on-going projects (how will you carve your own independent research niche? Will you be subsumed into the “bad lab project” as a co-investigator forever?)
  - All-male lab environment; if you are a woman, you could (potentially) feel outnumbered and somewhat misunderstood

## Mentor #2: Harriet Jung, MD

- Assistant Professor of Medicine in your department
- Funding:
  - Completed a mentored award (e.g. K23) and revising an R01 application that is topically in line with your research interests
- Co-investigator (not PI) for multi-center RCT; Faculty member for 6 years
  - First author : 3 peer-reviewed publications , 2 reviews, case reports in journals germane to your field
  - No senior author publications
- Impressive local reputation
  - Outstanding clinical acumen, excellent teacher; Adored by medical students, housestaff, and her patients
  - Others who have worked with her describe her as “completely devoted to her patients, but a bit disorganized”
  - You worked with Dr. Jung in the hospital on a clinical rotation where you found her enthusiastic and hard-working, and a positive role model



## Dr. Jung as Mentor: what might affect her mentoring practices?

- Unlikely has “track record” of training research mentees at your level
  - Limited mentoring “tool box” to help you succeed
  - How reliant is she on her own mentor?
- Will her clinical responsibilities interfere with mentoring?
  - Limited publication record (no time to write/too tired to write?)
  - Perception that she’s “disorganized” (Is she overwhelmed with trying to balance clinical/research duties?)
- Given your research similarities, how will an independent career path be assured for either of you?
  - Who would be first author/senior author on collaborative publications?

## Mentor #3: Jeffrey Parfait, PhD

- Associate Professor of Medicine (not a member of your department)
- Recognized national leader in your field of research of interest
- Support:
  - Current Ro1 funding; completed 2 prior Ro1's as PI
  - NIH-supported Core Facility director
- Laboratory comprised of :
  - 2 research assistants, 1 post-doctoral PhD
  - 3 post-doctoral MD fellows
- Solid publication record in last 10 years
  - 25 lead- or first-author publications in high or top tier journals
- You have met him briefly via a mutual administrative committee
  - Reserved person of "few words"

## Dr. Parfait as Mentor: what might affect his mentoring practices?

- Mentors external to your department might not be as knowledgeable regarding important factors in your personal career development pathway
  - Differences in promotions criteria
- He is a non-clinical person (PhD); if you are a clinician/MD
  - Does he understand/support the necessity of your clinical time? Expectations of your basic science knowledge might be unrealistic
  - Will he understand that your passion for research is inspired by clinical experiences, and support a project that reflects your passion?
- Laboratory/workplace issues:
  - People in lab are “like you”, i.e. trainees
  - Do your personalities mesh?

# Identifying **Key Features** in Potential Mentors

Keyser DJ et al , *Acad Med* 2008; Sambunjak D et al, *JAMA* 2006; Burnham EL & Fleming M , *Clin Trans Sci* 2010

Mentor Characteristic/Feature	#1 Dr. Stellar	#2 Dr. Jung	#3 Dr. Parfait
Background/expertise to help you develop ideas for projects	PI: Yes Lab personnel: can assist with day-to-day mentoring	PI: Limited, but clinical research/ MSCR experience Her mentor as co-mentor?	PI: Bench based Expertise of core facilities
Resources	Yes, very stable funding	No funding pending	Running out?
Time	Overseeing a lot of people	Lots of clinical responsibilities	Lab and core responsibilities
Ability to collaborate	Likely both MDs and PhDs, international colleagues  Will you be 1 <sup>st</sup> author?	Local collaborators Clinical collaborators Potentially still dependent on her mentor's collaborators	Expertise from outside your dept, those who use core
Research Network	Probably excellent	Limited	Probably good-excellent
Senior status	Yes-Professor	No-Asst Prof	Yes-Assoc Prof
Role model	"Classic academician" Hard working, serious demeanor	Fun and enthusiastic	Reserved, quiet, hard working

All are important considerations, but does having any/all of them ensure that the mentor will have "best mentoring practices" once you start working with him/her?

# Additional **Key Features** in Potential Mentors

Keyser DJ et al , *Acad Med* 2008; Sambunjak D et al, *JAMA* 2006; Burnham EL & Fleming M , *Clin Trans Sci* 2010

Mentor Characteristic/Feature	#1 Dr. Stellar	#2 Dr. Jung	#3 Dr. Parfait
Editorial support with prompt feedback	Has the skills, ? time	Limited skills, ? time	Has the skills, ? time
Accessibility and open communication	??	??	??
Positive working environment	??	??	??
Commitment to the mentee	??	??	??
Fosters independence	??	??	??
Advocate and help with networking	??	??	??

More difficult to assess without working with person. How could you gain some insight?

# Meet Dr. Marcher, your mentee

- Completing her second year as a K12 scholar; hopes to qualify for a third year of K12 support. She is in year three of a tenure-track position.
- You have advised her, as her primary research mentor, to apply for two grants over the next six months, one of which has an upcoming submission deadline only a few weeks away
  - This plan aligns with the K12 Program expectations for scholar performance that she will become an independent investigator
- Department chair has expressed concern:
  - Dr. Marcher's lack of publications in the past year, with potential negative impact on tenure review.
  - He advises her to focus on writing more manuscripts, and spend less time grant writing in the next six months
- Dr. Marcher is confused and upset about what next steps to take in her career development strategy

What issues  
do you  
identify?



## Maintaining effective communication

- What is the core issue or problem in this situation?
  - The **primary mentor and department chair have not communicated** regularly with one another about a strategic plan for her career development.
  - **3 different agendas** and timelines
- What are some of the challenges in communicating with multiple mentors and leaders with authority over the mentee?
- What is the role of the mentee to maintain effective communication?



Mentors and mentees should seek support of a **Research Advisory Committee (RAC)**, *tailored to mentee*

- Provides **outside perspective** on research and career, and therefore supports mentor-mentee dyad
  - RAC is at “arm’s length” from research project
- **RAC can objectively evaluate mentor-mentee interaction** and communication
  - Facilitate **remediating** when necessary
  - Advice and assistance regarding communications with Chairs, Program Directors
  - Can providing **coaching to mentors**
- Help with **other aspects of career development *apart from research*** that are important to divisions/departments
  - Promotions dossier; evaluate appropriateness of clinical responsibilities, admin

## Strategies to help align expectations between mentors and mentees

- **Tools exist** to help operationalize mentor-mentee relationship and set goals
  - Individualized Career Development Plans
    - University of Colorado AMC
      - <https://www1.ucdenver.edu/offices/postdoc/postdocs/current-postdocs>
  - University of Wisconsin
    - <https://ictr.wisc.edu/mentoring-2/individual-development-plan/>
    - Interactive Career Development Plan
      - <https://ictr.wisc.edu/mentoring-2/individual-development-plan/>
  - American Association of Advancement of Sciences (web-based module)
    - <http://myidp.sciencecareers.org>
- Contracts and compacts (AAMC, others)

# Strategies to help align expectations between mentors and mentees

Not everyone has innate skills for **effective mentoring**, though these can be taught/learned

- CCTSI CO-Mentor program

- CCTSI Teaming for Early Career Researchers

- CCTSI LITeS

- NIH online seminars

- Career counseling and coaching

- Senior Leadership programs-



## Dr. Bento PhD, post-doctoral fellow

- You just finished writing a manuscript with results from Aim 1 of your grant; intend to submit it to a high-impact journal
  - Publication of this manuscript will establish your expertise in the area of research that you ultimately intend to pursue in a later grant
- Your secondary mentor, Dr. Jones, who was extremely helpful throughout the project in terms of study design, and organization of this manuscript seems surprised that YOU are not senior author on the manuscript; she would like to be first author
- You ask your primary mentor if you can be senior author (it will enhance your credibility in the field prior to R01 submission later in the year)
  - Your primary mentor, a senior investigator with >100 publications, is taken aback by this request, stating that since the work was performed in the auspices of his lab, your request is out of line

# Communication and Manuscript Contributor Agreements

- Need for regular and explicit communication
- Authorship requirement guidelines
- Manuscript Contributor Agreements
- Early on
  - Plan manuscripts
  - Authorship order
  - Delineate expectations for contributions

## Dr. Klein MD, is in last 2 years of his K award

- Very excited about his Ro1 proposal he has been working on.
- Tells you his aims will build upon research he has been conducting as a K scholar in your laboratory
- Feels strongly that the proposal clearly describes the logical next steps in the project and relates to his previous clinical work.
- When Dr. Klein meets with you to discuss his grant proposal, you are surprised and concerned
  - Proposal is very closely aligned with your own current and planned future directions
  - In a tactful way, you tell Dr. Klein that the proposal needs to be reworked, focused on a different, more independent direction of research.
- Dr. Klein leaves the meeting frustrated, disappointed, and unsure how to proceed.
- As his mentor, you feel like you have perhaps contributed to the situation by “clipping his wings” during the past 2 years

# Challenges of Fostering Independence

- **Intellectual Property:**
  - Who gets “credit” for grants, ideas?
  - Not always possible to share IP in a way that is always fair and equitable
- **Money:** can mentor fund a completely new direction for a mentee?
- **Time:** is the time that you or the mentee spends in fostering a new project worth it?
  - Might be quicker for mentor to carry forward a particular task than to train a mentee to do the task

## Conclusions: Mentoring and Collaboration Matter

- Evaluate potential mentors using discrete criteria to help identify suitable mentors
  - Mentor training and other opportunities can support and grow junior (and senior) faculty to assume mentoring roles, and promote success of the relationship
- Mentees have a major role in fostering and promoting a mentoring relationship that will be mutually beneficial with their mentor(s)
  - Mentees responsible for their futures
- Consistent communication, and aligning expectations between mentor and mentee are critical to success of the mentor-mentee relationship



# Resources

- Core competencies:
  - <http://www.nationalpostdoc.org/?CoreCompetencies>
- Compacts
  - <https://www.aamc.org/initiatives/research/postdoccompact/>
  - <https://www.aamc.org/initiatives/research/gradcompact/>
- Local options for additional Mentor Training
  - CCTSI: <https://cctsi.cuanschutz.edu/training>

## CU Denver | Anschutz Responsible Conduct of Research Training

- RCR Website: <https://research.cuanschutz.edu/regulatory-compliance/home/research-integrity/responsible-conduct-of-research-training>
- Monthly RCR Seminar Series:  
<https://research.cuanschutz.edu/regulatory-compliance/home/research-integrity/responsible-conduct-of-research-monthly-seminar-series>

**Mentor Skills:** Motivating, accessible, asking thought provoking questions, assisting networking, promoting professional growth, active listening, providing constructive feedback

**Mentor Characteristics:** Self-confident, inspirational, supportive, generous with time and energy, competent, empathetic, trustworthy, altruistic, respectful of mentee's goals

**Mentor Responsibilities:** Availability, work with interdisciplinary panel, support multiple aspects of scholar's program (scientific research, training, career development, personal/professional adjustment), build confidence, coaching, sponsorship, investment in mentee success, provide vision

**Mentor Credentials:** Sustained NIH funding, conducts interdisciplinary research, successful previous mentorship, regular authorship, well-respected in field, commitment to program and scholar for duration