Responsible Conduct of Research
Mentor/Mentee Responsibilities
and Relationships

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Mentor / Trainee Relationships

- Relationship characteristics
- Challenges
- Opportunities
- Mentoring relationships / tips
- Trainee tips
- Case studies
Mentor / Trainee Responsibilities
Opportunities and Challenges

Classes vs Lab time
Credit, Ownership?
Unequal relationship

Responsibilities, Time?
Family vs Research Competitors?
Mentoring

- Long tradition in science and medicine of one’s willingness to sponsor, support and encourage another’s career development

- Mentor can be faculty adviser, laboratory director, postdoctoral fellow, fellow student, another faculty member.

- Professional development
Mentor / Trainee Relationships
Characteristics

- Mentors foster development of trainees as capable, competent researchers
- Mentors evaluate and critique scientific research
- Mentors promote career development / preparation for the job market
- Mentor fosters the socialization of trainees
- Relationship changes over time
Mentor / Trainee Responsibilities
Research Environment

Variations in:
- Personalities / Egos
- Skill sets
- Research environments
- Diverse Projects

Mentors must assure:
- Equal treatment
- Professional development
- RCR training
Mentor / Trainee Relationships
Characteristics

- Trainees depend on the mentor
- Mentor / Trainee relationship is exclusive
- Mentor / Trainee relationship requires trust
- Relationship changes over time
Mentor / Trainee Responsibilities
Challenges

• Inherent marked imbalance of power
• Competing & conflicting responsibilities
• Appropriately assigning credit
• Providing timely & sound advice
• Finding the time! / Being available
• Avoiding favoritism (real or perceived)
• Handling the discovery of inappropriate research conduct
Characteristics of a Good Mentor

- Respectful
- Trustworthy
- Understanding
- Good listener and observer
- Approachable and accessible
- Able to maintain confidentiality
- Honor agreements
- Supportive
Mentor Responsibilities / Tips

- Mentor – trainee ratio should be low
- Set expectations for trainee’s time & performance
- Establish opportunities for frequent, open communication
- Direct teaching - discuss relevant experiments, rules, regulations & guidelines
- Be a good role model
- Share your own learning experiences
- Take time to explain decision-making
- Look for teachable moments
Expectations and Guidelines

• Meetings / opportunities for communication
• Expectations of what is to be communicated
• Time trainee is expected to spend on your research
• Criteria for judging performance
• How oversight will be handled
• How responsibilities are shared or divided
• SOPs (data recording, collection, storage, interpretation, ownership)
• How credit is assigned
Mentor and Trainee Responsibilities

Supervision and Review

• Mentors assume certain responsibilities
• Assure proper instruction in methodology
• Foster intellectual development of trainee
• Impart an understanding of responsible research practices
• Routinely check to ensure trainee develops into responsible researcher
Mentor and Trainee Responsibilities

Supervision and Review

• Review laboratory notebooks and other compilations of data
• Read manuscripts prepared by trainee carefully
  • Accuracy, reasoning, appropriate assignment of credit
• Meet with trainee regularly to discuss work
• Encourage trainees to present and discuss data at lab meetings, other venues
• Supervision can be shared with postdocs, others.
• BUT, ultimate responsibility rests with the mentor.
Mentoring Pitfalls

• “Mismatch” between Mentor and Protégé—uneasy relationship or cannot achieve level of communication

• Unrealistic expectations—Trainee expects or demands too much from mentor. Clearly define expectations from beginning

• Breaches of confidentiality—Mentor must keep confidences to build relationship
Trainee Responsibilities

Expectations and Responsibilities

• Do assigned work conscientiously
• Develop excellent work habits and techniques
• Respect the authority of others in the research setting
• Follow research regulations and protocols
• Live by agreements established for authorship / ownership
• Trainee must jointly commit to maintaining a productive / supportive / responsible research environment
Trainee Responsibilities

Expectations and Responsibilities

• Identify career plans
• Locate prospective mentors
• Distinguish between mentors and supervisors
• Be clear about needs and expectations
• Keep learning about effective mentoring
Trainee Tips

• Open communication with mentor

• Fulfill degree requirements

• Participate as members of research team and larger academic community

• Develop knowledge, skills and independence in research and other scholarly activities
Mentor and Trainee Responsibilities

Goal: Independent Researcher

- Ultimate goal – to produce independent researchers
- Difficult to give up control / ideas, encourage independence
- Most apparent with Postdocs
- Neither students, nor faculty – few rights or protection
- Often supported by mentor’s funding – exploitation?
Case Studies
Excellent Resource:

ADVISER, TEACHER, ROLE MODEL, FRIEND
ON BEING A MENTOR TO STUDENTS IN
SCIENCE AND ENGINEERING
NATIONAL ACADEMY OF SCIENCES
NATIONAL ACADEMY OF ENGINEERING
INSTITUTE OF MEDICINE
NATIONAL ACADEMY PRESS
Washington, D.C.
1997

http://www.nap.edu/readingroom/books/mentor/