Mentoring Our Diverse CALS Graduate Students and Postdoctoral Scientists

Heather McAuslane and Dan Hahn, Entomology & Nematology
Our Roadmap

- What is a mentor?
- Reflections on mentoring
- Traits of a good mentor
- Mentors facilitate career development
  - Graduate students
  - Post-doctoral scientists
- Opportunities to learn more
What is a Mentor?

- Mentor, a Greek mythological advisor to Telemachus
- Advisor/supervisor, coach, mentor...
What is Mentoring?

“Mentoring is a personal and reciprocal relationship in which a more experienced (usually older) faculty member acts as a guide, role model, teacher and sponsor of a less experienced (usually younger) student or faculty member…” (Brad Johnson, 2016).

<table>
<thead>
<tr>
<th>Career functions</th>
<th>Psychosocial functions</th>
</tr>
</thead>
<tbody>
<tr>
<td>coaching</td>
<td>role modeling</td>
</tr>
<tr>
<td>sponsorship</td>
<td>acceptance-and-confirmation</td>
</tr>
<tr>
<td>protection</td>
<td>counseling</td>
</tr>
<tr>
<td>challenge</td>
<td>friendship</td>
</tr>
</tbody>
</table>
Reflections on Mentoring

- Examples of good mentoring you received or you provided
- Examples where your mentor or you fell short
- Qualities of a great mentor
Qualities of a Good Mentor?

- Knowledgeable/successful in their field
- Familiar with the culture’s norms and expectations
- Demonstrates honesty, integrity
- Good communication skills
- Good listener
- Emotional intelligence
- Supportive and encouraging
- Interested in student’s development
- Willing to give time necessary
- Successful networker
- Willing to share mistakes and successes
- Able to work with diverse students
Mentors Facilitate Career Preparation

Results from 2016 survey of 91 PhD and 67 M.S. (thesis) CALS students – Galindo and McAuslane
Campus and REC M.S. students

No. of times chosen

- Academia (res/teaching)
- Industry/business
- State/fed research
- Academia (res/Extension)
- Unsure
- Non-profit/NGO
- State/fed regulatory
- Consulting
- County Extension
- Own business
- Other
- Academia (teaching)
Are Important Professional Skills Developed during Graduate School?

**Communication**
- Written communication for scientific audience
- Written communication for lay audience
- Oral communication
- Working with the media
- Teaching college students (academia)
- Teaching the public (Extension/outreach)
- Grant writing
Facilitating Professional Development

“People skills”

- Team building
- Working with diversity
- Mentoring/supervising people
- Conflict management
Facilitating Professional Development

**Management**
- Budget management
- Project management
- Leadership

**Other**
- Managing work/life balance
- Emotional intelligence
- Ethics and professionalism
- Job interview and negotiation skills
- Quantitative and computer application skills
- International experience
### Need for professional development NOT met

<table>
<thead>
<tr>
<th>SKILL</th>
<th>Rated v. imp. or critical by faculty</th>
<th>Faculty</th>
<th>PhD students</th>
<th>MS students</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral communication</td>
<td>98.9%</td>
<td>3.5%</td>
<td>17.3%</td>
<td>15.4%</td>
</tr>
<tr>
<td>Written communication for scientific audience</td>
<td>96.8%</td>
<td>9.2%</td>
<td>24.1%</td>
<td>5.2%</td>
</tr>
<tr>
<td>Ethics and professionalism</td>
<td>95.8%</td>
<td>10.6%</td>
<td>17.5%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Quantitative and computer application skills</td>
<td>87.2%</td>
<td>3.5%</td>
<td>14.8%</td>
<td>16.5%</td>
</tr>
<tr>
<td>Project management</td>
<td>80.9%</td>
<td>43.5%</td>
<td>48.7%</td>
<td>39.5%</td>
</tr>
<tr>
<td>Written communication for lay audience</td>
<td>79.8%</td>
<td>39.5%</td>
<td>29.0%</td>
<td>16.9%</td>
</tr>
<tr>
<td>Grant writing</td>
<td>77.7%</td>
<td>27.9%</td>
<td>47.5%</td>
<td>65.3%</td>
</tr>
<tr>
<td>Emotional intelligence</td>
<td>77.4%</td>
<td>34.6%</td>
<td>42.9%</td>
<td>38.6%</td>
</tr>
<tr>
<td>Mentoring/supervising people</td>
<td>73.4%</td>
<td>32.1%</td>
<td>46.8%</td>
<td>44.7%</td>
</tr>
<tr>
<td>Job interview and negotiation skills</td>
<td>73.4%</td>
<td>40.5%</td>
<td>57.5%</td>
<td>46.1%</td>
</tr>
<tr>
<td>Leadership</td>
<td>72.3%</td>
<td>34.5%</td>
<td>35.4%</td>
<td>29.3%</td>
</tr>
<tr>
<td>Conflict management</td>
<td>71.3%</td>
<td>50.6%</td>
<td>47.4%</td>
<td>35.1%</td>
</tr>
<tr>
<td>Working with diversity</td>
<td>69.9%</td>
<td>37.5%</td>
<td>27.3%</td>
<td>21.6%</td>
</tr>
<tr>
<td>Managing work/life balance</td>
<td>67.0%</td>
<td>42.7%</td>
<td>47.5%</td>
<td>39.2%</td>
</tr>
<tr>
<td>Team building</td>
<td>61.7%</td>
<td>36.1%</td>
<td>38.5%</td>
<td>30.3%</td>
</tr>
<tr>
<td>Budget management</td>
<td>57.5%</td>
<td>65.9%</td>
<td>67.5%</td>
<td>63.5%</td>
</tr>
<tr>
<td>Teaching college students (academia)</td>
<td>53.2%</td>
<td>22.2%</td>
<td>38.5%</td>
<td>39.1%</td>
</tr>
<tr>
<td>Teaching the public (Extension/outreach)</td>
<td>53.2%</td>
<td>38.6%</td>
<td>44.7%</td>
<td>35.6%</td>
</tr>
<tr>
<td>International experience</td>
<td>38.3%</td>
<td>40.0%</td>
<td>36.0%</td>
<td>54.6%</td>
</tr>
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<td>Working with the media</td>
<td>29.8%</td>
<td>74.4%</td>
<td>74.7%</td>
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CALS Individual Development Plan

Professional Development Resources for CALS Graduate Students

The University of Florida Graduate School requires that all Ph.D. students, starting Fall 2017 or later, and their faculty mentors develop, and yearly re-evaluate, an Individual Development Plan (IDP) to aid in students’ professional development. Documentation of the IDP is required annually as described on the Graduate School’s website linked below. A list of resources to enhance professional skills follows. While only Ph.D. students are required to have an IDP, M.S. students and their advisers may wish to make an IDP and are encouraged to take advantage of the professional development opportunities below.

Individual Development Plan templates (may be modified by individual CALS departments)

- Individual Development Plan Year 1
- Individual Development Plan Years 2-4

http://cals.ufl.edu/students/graduateIndividualDevPlan/index.php
Steps for Creating your IDP

Assess your skills, values, and interests
- Open-ended and survey questions in self-assessment tools
- myIDP survey available for detailed values + interests assessment
Self-Assessment via myIDP survey

http://myidp.sciencecareers.org/

1. What is important to you (i.e., your values)?
2. What type of work would you like to pursue (i.e., your interests)?
3. Do you know if your current skills match with the competencies required for your chosen career?
Self-Assessment of Particular Skills

- Research skills and knowledge
- Effectiveness/purpose
- Communication
- Management & leadership skills
- Professionalism
- Career advancement

*(based on National Postdoctoral Association core competencies)*
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5. **Revise and review as needed**
   - Sign, update as necessary
Resources

CALS

- [http://cals.ufl.edu/students/graduateIndividualDevPlan/index.php](http://cals.ufl.edu/students/graduateIndividualDevPlan/index.php)

Graduate School


Advisor

Department

Student organizations

Professional organizations
PhD – a thing certifying someone can think and has had some basic training
Postdoc is not a uniform category
Think carefully about your expectations before you recruit and hire to meet your needs.
NSF grants require a postdoctoral mentoring plan!

See UF Office of Postdoctoral Affairs for Resources for PIs and postdocs.
Get to Know Yourself & Them

• Get to know yourself – many ways including personality tests (Myers & Briggs 16 personalities, Ritberger 4 colors, etc.), but take the time to be introspective.

• Pay attention to your own habits, likes & dislikes, as well as theirs? Are they compatible with your goals?
Make an IDP

• Work through it with them and be reflective

• Personality is critical – their personality and what drives them is important in determining both of your success and life satisfaction.
It was the best of times...postdoc can be great!

Technical Competence

Shed student distractions for full focus on scholarship

Asked to review others work
It was the best of times... and the worst of times! Postdoc can be a great time, but also stressful.

“Just work till midnight, you need to relax too”
You have got to ready to facilitate growth, both in them and you.

National Institutes of the PostDoc Meat Grinder
- or -
Evolution of a Post-Doctoral Fellow

General Demeanor:
Motto:
Career Aspiration:
Relationship with Advisor:
Each Experiment is:
The Night Before a Big Result:

1st YEAR POST-DOC
GUNG-HO BONEZAI!
Tenure Track Faculty
Congenial
A potential Nature Paper
Can't Sleep

3rd YEAR POST-DOC
BATTLE HARDENED
Slow and Steady Wins the Race
Biotech Company
Guarded
A possible prelude to a bigger result

5th YEAR POST-DOC
SHELL-SHOCKED
Another day, another chance to change careers
Manager at Radio Shack
Hostile
Worthless Phenomenology

Don't let this happen to you!
Management – mentoring and management not the same

• Manage down, but also manage up!

• Get to know your PI’s personality!

• Help to manage PIs efforts on postdoc’s behalf.
Current Hahn Lab Structure

- PI
- Postdoc
- Postdoc
- Postdoc
- PhD Student
- PhD Student
- PhD Student
- MS Student
- MS Student
- Undergrad
- Undergrad
- Undergrad
- Undergrad
- Undergrad
- Undergrad
- Undergrad
Building Mentoring Hierarchies
Building Community

- Postdoc should work with folks in your group, but also get out and find others across campus – build a constellation of mentors.

- UF is a big place with many folks spread out amongst colleges and departments, get out and look for people with like interests

- Encourage postdocs to attend events that are not directly related to their work - spontaneity! Can enhance both their career and your lab.
Introducing myIDP: A career plan customized for you, by you.

- The first and only online app that helps scientists prepare their very own individual development plan.
- Recommended by leading professional societies and the NIH.
- Developed by scientists at FASEB, UCSF, and the Medical College of Wisconsin in collaboration with AAAS and Science Careers, with support from the Burroughs Wellcome Fund.

Visit the website and start planning today!
myIDP.sciencecareers.org
Want to know more?

- CALS Teaching Enhancement Symposium (August 14, 2018)
- Graduate School panel with UF Doctoral Mentor Award winners
- CALS mentor training program for new faculty
- International Mentoring Association annual conference (Gainesville) – March 11-13, 2019