Module I Getting Started

Resources:
National Postdoctoral Association Core Competencies Toolkit. 2007-2009:
  http://www.nationalpostdoc.org/competencies
Science Individualize Development Plans: http://myidp.sciencecareers.org/
Getting the Mentoring You Need:
  http://sciencecareers.sciencemag.org/career_magazine/previous_issues/articles/2014_01_30/caredit.a1400027

Prior to meetings, mentors and postdocs should exchange bios. Postdoc should provide CV to mentors. Mentors and advisors should familiarize themselves with the background reading materials (articles) that accompany module 1. Similarly, the postdoc should review the NPR Postdoctoral core competency document that is provided.

Objectives for the first meeting:
  1) Get to know one another
  2) Understand the ground rules for the mentoring relationship
  3) Conduct an initial assessment of the postdoc's current competitiveness for a faculty position. Identify strengths and areas in need of improvement.
  4) Develop a schedule for future meetings

For the first meeting, it is best if everyone arranges to be present, either by phone, teleconference, or in person.

First: Do introductions. Let each person present a brief career biography and highlight his/her research interests. Including one or two hobbies or extra-curricular activities is encouraged.

Second: Advisor should lead a discussion about expectations.
The principal goal is to create constructive and positive relationships among all parties. Each group should establish and agree upon its own ground rules in this discussion. Suggestions are provided below, which you can expand and modify as appropriate.

Advisor: Provide regular interaction and mentoring for the postdoc, including detailed research guidance. Set clear expectations for research performance, including responsibilities for experimental design, oversight of students, involvement in collaborations, preparing manuscripts, posters, and talks. Give feedback to the postdoc on job performance, and help him/her identify local resources. Pro-actively support the relationship between postdoc and mentors for professional development. Stay in touch with mentor to ensure consistency of advice for postdoc, and maintain confidentiality concerning specific job-related issues.

Mentors: Provide guidance on professional development topics as detailed in the modules, taking primary responsibility for setting dates and times for interactions. Stay in touch with the advisor

to discuss general issues, while maintaining confidentiality concerning specific discussions with the postdoc.

Postdoc: Interact professionally with both advisor and mentors, and maintain clear lines of communication with both. Ask advisor for clarity if necessary concerning job responsibilities and prioritization of tasks. If specific issues arise concerning interpersonal relationships or job performance, discuss them with the advisor first.

Third: Ask the postdoc to provide a self-assessment of core competencies (using the Core Competencies Checklist provided).   Add / delete any subcategories as relevant to your field.
1. Discipline-specific conceptual knowledge
2. Research skill development
3. Communication Skills
4. Professionalism
5. Leadership and management skills
6. Responsible conduct of research

The goal of this exercise is to identify perceived areas of weakness that can be addressed. The postdoc should provide the advisor and mentors a copy of the self-assessment checklist for later reference.

Mentors and advisors, after hearing the self-assessment and reviewing the postdoc's CV, should provide some general impressions of strengths and opportunities to improve competitiveness.

Fourth: Set up a meeting schedule. It is generally suggested that meetings occur once a month, particularly in the beginning. Decide if everyone will attend all meetings or if one-on-one or two-on-one meetings with the postdoc are preferable.

Module: Research planning and publication options

Review CV
-Focus on the research aspect of the postdoc CV asks questions concerning previous research, have postdoc explain research in detail
-Discuss issues with previous research
-Discuss future directions postdoc would like to take with research ask for details such as experimental design
-Discuss ways to improve the research section of CV
-Presentation of research
-Provide example of CV from successful faculty applicant
- Set goals based on identification of areas that "need attention"

Improving the Research

-Discuss how you improved literature review process (tools used, software, search engines, etc). Explain what resources are available at the university
-Mentor describe what is expected in faculty search
-Mentor provide examples of ways to gain more research experience as postdoc
-Mentor explain in detail own current research
-Mentor discuss funding own research
-Mentor discuss collaboration in own research
-Explore what resources are available to postdocs at the institution, such as ADVANCE workshops for new faculty and sponsored program workshops on grant writing

For next meeting Have postdoc identify possible collaborators for future research

Module: Collaboration options

Resource:
What is Research Collaboration, J.S. Katz and B.R. Martin, Science Policy and Research Evaluation Group, UK 1995

-Have postdoc explain choice of collaborators
-Mentor provide suggestions on contacting individuals for collaboration
-Do's and Don'ts of approaching faculty to collaborate on project
How do you find partners within your university and at other institutions (for multi-state, multi-disciplinary) research partnerships?
Potential problems with collaborative research
    Style of investigators, Style of research across disciplines, Academic vs Industry –Data confidentiality, fiscal accountability, publication goals – authorship, intellectual property

        Industry – University Collaborations –
                How do these work at the university?
                What are the funding models that exist for this type of collaboration?
                How do these differ from government agency collaborations and grants?
                If the postdoc does not have grant experience, discuss and provide models for grant writing, budget preparation
        Sponsored Programs Office
                Explain how university Sponsored Programs Offices work
                Have the postdoc explore the range of data bases.

Module: Written Communication

Resources:
How to Write a Lot: A Practical Guide to Productive Academic Writing. Paul J. Silvia. American Psychological Association. 2007. ISBN 1591477433.

Scientific Writing and Communication: Papers, Proposals, and Presentations. 2009. A.H.

Hofmann, Oxford Press 2nd Edition. ISBN-13- 978-0199947560

Writing Successful Science Proposals. 2009. A. Friedland and C. L. Folt. Yale University Press. New Haven. 2nd Edition. ISBN-13- 978-0300119398

Discuss the need for perfecting writing skills and identify opportunities further development of the skills such as the following:
Scientific publications
Provide insight on writing styles, writing tips, review recent writing of the postdoc and provide guidance
Grant Writing: government, corporations, foundations
RCR – iThenticate (plagiarism checker) or other issues associated with plagiarism

Module: Leadership and Professional Society Engagement

Resources:
J. Zenger, Contributor, Forbes 7/16/2013.
http://www.forbes.com/sites/jackzenger/2013/07/16/throw-your-old-plan-away-6-new-ways-to-build-leadership-development-into-your-job/

Leadership theory and practice. 2004. P. Northouse. 3rd edition. Thousand Oaks: Sage Publications.

Lab Management. Resources for the Development of Early-Career Scientists. Howard Hughes Medical Institute. http://www.hhmi.org/educational-materials/lab-management.

At the Bench: A Laboratory Navigator. 2002. K. Barker. Cold Springs Harbor Laboratory Press. ISBN-13: 9780879698669

At the Helm: Leading Your Laboratory. 2010. K. Barker. Cold Springs Harbor Laboratory Press

-Work and leadership development should not be seen as competing activities (J. Zenger, Contributor, Forbes (http://www.forbes.com/sites/jackzenger/2013/07/16/throw-your-old-plan-away-6-new-ways-to-build-leadership-development-into-your-job/)

-Discuss need for leadership skills
-Review CV and discuss postdoc current skills
-Mentor describe possible opportunities to develop leadership skills
Leadership training workshops
Committee involvement
Involvement in professional organizations, - Advantages - Stay current in a dynamic field, Broaden your perspectives, Make professional contacts, Recognition for your work and your institution, Serve the community, Develop leadership skills, Find career opportunities (Source http://www.educause.edu/research-publications/books/cultivating-careers-professional-development-campus-it/chapter-6-profession-needs-you-engagement)

How to balance the need for engagement with the demands on time - be wary of time management issues associate with too much of good thing.

Module: Research Program Management and R-Time management & goal setting

Fiscal management
Project management
Facilitating teamwork
Delegating responsibility
Responsible Conduct of Research – implications and risks
Data ownership, Data Archive
Publication practices
Human Subjects
Animal Research
Conflicts of Interest
Identifying resources on campus

Year 2 suggestions

Module: Research Presentation Skills

Resource:
Beyond Bullet Points: Using Microsoft Office PowerPoint 2007 to Create Presentations That Inform, Motivate and Inspire. 2011. Cliff Atkinson. 3rd Edition. Microsoft Press.352 pgs. ISBN-13: 978-0735627352

How to create good presentation slides
Tips on giving good research presentations – tell a story with a thread that connects your ideas and data. Simple and clear is critical.
Knowing your audience
Giving an elevator speech
Review 3MT examples, comment and critique
Creating a good poster and giving a poster presentation

Module: Seminar presentation on campus of mentor

How to prepare a invited seminar presentation
What types of questions should you prepared for during a visit at another institution?
What types of questions should you ask during a visit at another institution?

Module: Attend conference with mentor

Resources:
So What? How to communicate what really matters to your Audience. M. Magnacca. 2009 Pearson Education, New Jersey ISBN13- 978-0137158263; Especially Chapter 5 Grab your Audience's Attention: First Impressions Set the Presentation on – or Off- Course

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The "Elevator Pitch" for scientists. Geoffrey Aguirre Lab
     https://cfn.upenn.edu/aguirre/wiki/public:elevator_pitch

Networking
Discuss the importance and value of networking and provide some tips on how to network at conferences.
Post Doc - Prepare a "1-3 minute" elevator speech which can be used at poster sessions, job interviews or at conferences for networking purposes.   Practice with mentor and advisor and get feedback on the presentation.

Tips – eliminate jargon terminology to save time, Draft it and practice in advance. This will take time and patience as this is not an easy task, especially if you are not comfortable talking to strangers. If this is difficult for the postdoc, consider Toast Masters like groups to practice this technique. This will also help with interviewing skills. Google 3 Minute Thesis winners and study how these students portray their research in a brief period of time.

Module: Difficult situations

Resource:

Professionalism, Core Competency. National PostDoc Association. 2007-09.
http://www.nationalpostdoc.org/component/content/article/48-other-publications-a-resources/353-core-four-professionalism

Review and discuss the five difficult situations, have the PD suggest some difficult situations that have faced in past
     -Discuss how they made them feel
     -How situation was handled
     -How situation could be handled better

Discuss different interactions encounter
     -Peer
     -Colleague
     -Student
     -Employee
     -Supervisor

Discuss need for respect, professionalism, code of conduct, norms, trust, individual responsibility, engagement, collaboration

<u>Module: Preparation for interviews</u>

Review of materials provided by the university
What homework should you do prior to visiting campus
What questions to ask before during and after the interview

Resources for new faculty
Expectations
Developing the start-up package – what things to consider putting on your list (equipment, lab assistance, graduate student funding, travel)
What expenses do faculty have that they are expected to cover? (phone, library, copying, travel, others)

Module: Practice presentation sessions

Postdocs should prepare a job seminar and practice it before the lab group and advisor to gain confidence and helpful comments.

Module: Teaching

Resource:
Writing a Teaching Philosophy Statement, 1998. L. Haugen, Iowa State University.
http://www.celt.iastate.edu/teaching/philosophy.html

Discuss the role of teaching for a primary research faculty vs a primary teaching faculty.
How do you prepare a Teaching Philosophy Statement?
College teaching – what to add to your CV? What else can go in the teaching area of CV – mentoring undergraduate, visiting summer students, SROP, LSAMP.
Discuss ways in which the PD can gain teaching experience if they have none as a graduate student.
Discover and discuss teaching resources on campus. Are there centers of teaching excellence on campus that share valuable resources?

Is the PD familiar with emerging technology and higher education issues (distance education, virtual classroom, flipped classroom)?

Module: Future Faculty Issues

Resource:
Preparing Future Faculty. http://www.preparing-faculty.org/PFFWeb.Resources.htm

The roles of a faculty member -The big three: Research, Teaching, Engagement; others – departmental, college and university good citizen,
Finding graduate students, evaluating admission packets to get a great first student
Mentoring graduate students, undergraduates
Building your lab identity
Promotion and tenure