The Postdoctorate

Postdoc Career Life Cycle

A significant number of men and women leave the academic career pipeline before the tenure track, with less than a third of postdocs obtaining tenure-track positions. While market pressure plays a large role there are also other factors, particularly for women who are more likely than men to depart academia.

Reasons Postdoc Women Leave Science

From the literature, the leading factors for postdoc women are:
- The challenges of family formation, particularly during the short-term postdoc position that offers no stability and often limited family-friendly benefits.
- A perceived lack of mentoring, where postdocs often rely solely upon their busy postdoctoral supervisor, or “PI,” as their primary mentor and can have difficulty taking time away from research themselves for mentoring activities.
- Feelings of isolation for postdocs who more closely align with the lab or groupwork than with the institution and feel like they are “outsiders” between students and faculty.
- Lack of confidence, where there is evidence that postdoc women are less likely than their male peers to feel qualified for a principal investigator position and are less likely to re-apply a second time for such a position.

International and underrepresented minority (URM) postdocs face these same challenges and, in some cases, to a greater degree.

Mentoring

The cornerstone of the postdoctoral experience, mentoring should be fostered in numerous ways, supporting the mentors as well as postdocs in finding mentors.
- Treat, and reward, mentoring as a “core” part of research.
- Develop structured mentoring programs to encourage multiple mentors for postdocs, which could encompass one or more of the following:
  - One-on-one mentoring.
  - Peer mentoring.
  - Mentoring orientation activities.
  - Group-based meetings.
  - Provide training in mentorship for mentors and mentees.
- Encourage the development of mentoring plans, and the use of other mentoring tools like the Individual Development Plan (IDP).

Postdoctoral Policies and Services

As a first step, institutions should consult the NPA Recommended Policies for institutions that describes a baseline of postdoctoral policies thought to foster postdoctoral success and satisfaction.

Family-Friendly Policies and Services

In addition, establish family-friendly policies for all postdocs at an institution, ensuring that postdocs with different sources of funding have equitable benefits. Among these are:
- Clear guidance on family-friendly policies and practices in order to avoid case-by-case implementation, especially where there are differences by postdoc funding source.
- Paid parental leave provisions for all postdocs.
- Unpaid family leave for those postdocs who may not be covered by FMLA.
- “Postdoc clock” extensions for extended family-related leaves.
- Affordable dependent care options for healthcare, independent of funding source.
- Portable childcare subsidies usable at any eligible childcare service.
- Postdoc access to any available “dual-career” job assistance.
- Compliance reviews regarding Title IX pregnancy protections for postdocs, such as maternity leave offerings, pregnancy safety protocols, and accountability for equal treatment of pregnant postdocs.

Services for Postdoctoral Supervisors

- Enhance communication about postdoc policies and procedures.
- Provide resources to postdoctoral supervisors on postdoc policy, particularly family-friendly policies and guidelines.
- Foster mechanisms for limiting the impact on research of a postdoc’s pregnancy or leave period, such as: flexible work schedules and standardizing accommodation strategies during pregnancy and leave.

Career and Professional Development

Career and professional development services have the potential to impact all postdocs, but particularly postdoc women. Postdoc offices can be a natural home for these, but other offices can consider extending their services to postdocs.
- Establish a coherent postdoctoral training program or curriculum.
- Use the NPA core competencies as a guide for postdoctoral training, at the institutional, departmental or individual level.
- Encourage networking activities for postdocs, including training, and networking venues such as postdoctoral associations.
- Provide access to career development resources, including:
  - Tools for career planning.
  - Institutional career services for postdocs.
  - Insight into the faculty search process.
  - Workshops and resources on career-life balance.

Who Will Find This Resource Useful?

- Offices of postdoctoral affairs;
- Graduate schools that include postdocs in their purview;
- Career centers, training offices or programs that serve postdocs;
- NSF-funded ADVANCE programs that include postdocs in their activities;
- Postdoctoral associations;
- Offices of international services;
- Researchers who supervise and mentor postdocs;
- Institutional leaders seeking an overview of the key gender issues for postdocs;
- Federal funding agencies;
- Professional societies; and
- Individual postdocs.

Commentaries

The volume also includes invited commentaries from the following authors.

A Perspective from Leadership: Critical Considerations in Retaining Postdoctoral Women of Color in Academia
By Sibby Anderson-Thompkins and Deborah Stroman

Achieving Cooperation between Universities and Federal Granting Agencies to Create a Flexible Family-Friendly Workplace
By Mary Ann Mason

Mentoring Postdoc Women from an Institutional Perspective
By Donna J. Dean and Cynthia L. Simpson

This material is based upon work supported by the National Science Foundation under Grant No. 0819994, via an ADVANCE Partnerships for Adaptation, Implementation, and Dissemination (PAID) Award. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the authors and do not necessarily reflect the views of the National Science Foundation.