

2014

UNIVERSITY OF PENNSYLVANIA

Biomedical Postdoctoral Programs

Policies for Postdoctoral
Appointments, Training and
Education

BIOMEDICAL POSTDOCTORAL PROGRAMS

Policies for Postdoctoral Appointments, Training and Education

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Postdoctoral Appointments at the University of Pennsylvania

*The Policy for Postdoctoral Fellows in the Physical, Biological,
and Health Science and in Engineering*

**A copy of the
University's
Postdoctoral
Policy is in the
Appendix or can
be viewed on-line
at the Biomedical
Postdoctoral
Programs
website. .**

The University of Pennsylvania was one of the first institutions in the country to adopt a University-wide postdoc policy. The *Policy for Postdoctoral Fellows in the Physical, Biological, and Health Sciences and in Engineering* (Almanac April 30, 1996), was visionary in that it stipulated that (a) all postdoctoral appointments should be accompanied by a formal offer letter stating the duration of the appointment, the source of stipend, and health insurance benefits; (b) minimum stipend levels are to be the National Institutes of Health recommended minima (c) single-coverage health insurance is mandatory and that it should not be deducted from the stipend; (d) no individual can be in a postdoc title at the University for more than five years; (e) postdocs are eligible to receive up to six weeks new child leave with full pay; (f) appointees must provide proof of doctoral degree; and (g) postdocs have specific obligations as part of the responsible discharge of their research duties. The policy also indicates that appointments have to be terminated in writing at least three months prior to the end of the appointment. In addition, the policy requires that a standard compendium of orientation information be provided to postdocs as well as access to mediation services for grievances.

Policy for Postdoctoral Fellows at the University of Pennsylvania

In 2004, the former Policy was updated and revised to extend coverage to include all postdoctoral appointees regardless of School or discipline (Almanac September 7, 2004). The new Policy for Postdoctoral Fellows at the University of Pennsylvania also provides guidelines for the ownership of primary research records and similar unpublished materials (Almanac September 7, 2004).

Policy for Postdoctoral Trainees at the University of Pennsylvania

In 2008, the former Policy was updated to give formal acceptance of the NIH/NSF definition of postdoctoral scholars . The new Policy also contains revisions to the various leave policies for postdocs. (Almanac, January 15, 2008).

Biomedical Postdoctoral Programs (BPP)

Mission Statement

"The University of Pennsylvania created the *Policy for Postdoctoral Fellows in the Physical, Biological and Health Sciences and in Engineering* in 1996. This policy describes the rights and obligations of postdoctoral fellows as members of the University community. The School of Medicine established the OPP in July 1997 to serve as a central resource and to enhance and support the work experience of postdoctoral appointees, their faculty mentors, and staff engaged in research and research training." On July 1, 2001, in accordance with Affiliation Agreements signed by the Schools of Veterinary and Dental Medicine, the role of OPP was expanded to support the postdoctoral appointees, faculty mentors and staff of these two schools. To accurately reflect the new and expanded role of OPP, the name of the office was changed to Biomedical Postdoctoral Programs (BPP).

An Organizational Chart for Biomedical Postdoctoral Programs is in the Appendix or can be viewed on-line at the BPP website under BPP Policies.

Also see the Postdoc Training page of the BPP website for programming.

BPP has established a standardized appointment procedure for all Biomedical postdocs. This includes the use of approved (by the Standing Committee of Departmental Chairs and Directors of Centers and Institutes) appointment letters for initial appointments, renewals and terminations and verification of doctoral degree. It monitors length of service to ensure no one is appointed to the postdoc title for more than five years at Penn. An orientation package is provided upon arrival and tri-annual orientation sessions are held for new postdocs. Part of the orientation process includes a registration form to provide information for the postdoctoral database. A comprehensive website (<http://www.med.upenn.edu/postdoc>) contains information on mandatory training sessions, postdoctoral funding opportunities, resource offices and career development. There is also a PENNMed Postdoctoral posting service which permits faculty to post postdoctoral openings on-line. BPP works with Biomedical Graduate Studies and the Center for Bioethics to provide Bioethics training. The Office has developed a series of postdoctoral Career Workshops, which address basic-job search skills, academic careers, industrial careers and alternative careers.

Organizational Structure

Dr. Susan Weiss, Associate Dean for Postdoctoral Research Training, is the Director of BPP; Mary Anne Timmins is the full-time Director of Administration. The BPP office is also staffed by an Academic Coordinator, a Business Coordinator and a Recruitment and Diversity Coordinator. Dr. Weiss reports directly to Dr. Glen N. Gaulton, Executive Vice Dean and Chief Scientific Officer for the School of Medicine. BPP is served by an Advisory Committee consisting of senior faculty members from the Schools of Medicine, Dental Medicine and Veterinary Medicine, in addition to affiliates such as Children's Hospital of Philadelphia (CHOP) and Howard Hughes Medical Institute (HHMI). BPP office staff and two postdoctoral fellows nominated by the Biomedical Postdoctoral Council (BPC) also serve on the advisory committee.

Postdoctoral trainee appointment policies

Definition of a Postdoctoral Appointee

It is recommended that the postdoctoral title be reserved for individuals that have recently received their qualifying terminal degree. Individuals several years past this degree should already be in a permanent career track and not considered trainees. This appointment is, by nature, preparatory and therefore there is an obligation for the institution, school, department and faculty mentor to provide training. The following definition has been adopted for all postdoctoral fellows at the University of Pennsylvania:

A postdoctoral appointee is a person who has **recently** earned a Ph.D., M.D. or equivalent doctoral degree, and who joins the University of Pennsylvania to perform research full-time under the supervision of a member of the faculty. The position can be held at the University of Pennsylvania for up to five years irrespective of prior experience at other institutions and is meant to provide additional research and/or scholarly training in preparation for a position in academe, industry, or government.

Stipend Levels

Minimum stipend levels are mandated for all postdoctoral appointees. BPP stipends are based on the current NRSA stipends <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-14-046.html>. The minimum levels for the first year of postdoctoral experience at PENN is the **current** NRSA year 00 level; for each additional year of postdoctoral experience at PENN, the postdoctoral fellow's stipend should increase according to the NRSA levels up to year 04. It is important to remember that recommended stipend levels represent minimums and increments for prior postdoctoral research experience should be awarded up to the NRSA maximum, which is attained in year 07. Penn investigators are also expected to comply with any postdoctoral stipend guidelines that are promulgated by their sponsors, if these sponsor-specified guidelines exceed the Penn minimum stipend levels.

Sick Leave Policy

Because postdoctoral appointments are considered training positions and are not traditional staff positions, postdocs are not eligible for full-time employment benefits. However, this does not mean that they should not receive adequate benefits. The following addition to the Postdoctoral Policy as it applies to BPP postdoctoral appointees has been adopted:

Postdoctoral appointees may continue to receive stipends for up to 15 University business days of sick leave per year. Postdoctoral appointees forfeit any unused sick leave at the end of the appointment year. Under exceptional circumstances, a period of leave due to illness or incapacity may be extended at the discretion of the mentor. Mentors may request medical documentation from a health care provider for any extended absence. Additional sick leave may be approved in the discretion of the mentor.

Vacation Policy

Vacation and Mentor-Approved Flexibility of Observed Holidays and Winter Break

In any appointment year, a PDT may elect to take up to ten University business days as paid vacation days, on which days the PDT will continue to receive his or her stipend. PDTs are also entitled to the eight official holidays observed by the University and are eligible to take the University's special winter vacation, during which time the University is typically closed. If a PDT wishes to work and/or perform research during an official holiday or special winter vacation, s/he can use the equivalent time as additional paid vacation days. PDTs forfeit any unused vacation days or holidays at the end of any appointment year. All vacation must be approved in advance by the mentor; additional vacation may be approved at the mentor's discretion.

New Child Leave Policy

The following addition to the postdoctoral policy has been adopted:

Postdoctoral appointees may continue to receive stipends for no more than 60 calendar days of leave per appointment year for adoption or birth of a child. Either parent is eligible. Postdoctoral appointees must discuss the use of new child leave in advance with the mentor. A mentor may not deny a request to use new child leave without the authorization of the appropriate administrative office. Unused sick leave or vacation may, with approval, be used to extend the period of new child leave. Additional new child leave may be approved at the discretion of the mentor.

Unpaid Leave

Postdoctoral appointees requesting extended periods of time away from their training experience, including leave in excess of available sick and/or parental leave, must obtain approval for a leave of absence without stipend continuation. Approval for such leave must be requested and approved by the mentor *in advance*.

Terminal Leave

A period of terminal leave is not permitted.

Termination for Cause

The existing University-wide Postdoc Policy stipulates that the mentor can only terminate postdoctoral appointments with three months written notice. This protects the postdoc from unfair dismissal. However, rare circumstances may arise where immediate dismissal is appropriate. The following addition to the postdoctoral policy as it applies to BPP postdoctoral appointees has been adopted:

Gross violations of postdoctoral obligations as indicated in the *Policy for Postdoctoral Fellows at the University of Pennsylvania* (Almanac September 7, 2004) may be grounds for immediate dismissal. Such situations must be reviewed with BPP. Other University administrative offices will be consulted as necessary.

Recommended Postdoctoral Notice of Resignation

In the event that a postdoc resigns prior to the end of his or her appointment, it is appropriate and professional to provide as much notice as possible prior to leaving the laboratory. This time period should allow the postdoc to successfully complete or transition any ongoing projects. We strongly recommend that all BPP postdoctoral appointees follow the following guideline:

When a postdoctoral appointee chooses to resign from his or her position prior to the end of the appointment period as indicated in his or her postdoctoral appointment letter, it is expected that he or she will provide at least one month's notice. Upon leaving the laboratory, a postdoc has an obligation to leave the original notebooks, data and reagents in a state that will allow continuation of the project and ensures compliance with the Intellectual Property Policy and other relevant policies of the University.

Postdoctoral Training Program

Program Goals

The postdoctoral experience must be considered as a professional *training* experience irrespective of the source of support for the postdoc. Although federal regulations indicate that postdoctoral researchers supported by RO1's are "fee-for service" for tax purposes, in reality there is no difference between the experience of these individuals and that of those funded by NRSA or private foundation awards. The AAU, NRC, GREAT group and the Office of Research Training, the National Institutes of Health support this position.

The BPP Advisory Committee endorses the concept that the goal of the training is to *prepare* individuals to follow scientific careers that draw on their unique, in-depth education and expertise in the biomedical sciences. This includes acknowledging that current career and job market trends indicate that these scientific careers may not be in academia. At the same time, we acknowledge that the primary responsibility for a successful training experience lies with the postdoc. This program outline presupposes that postdocs demonstrate high levels of productivity, initiative, and commitment to research excellence. Therefore, part of the responsibility that the School of Medicine, School of Dental Medicine and School of Veterinary Medicine has in supporting its postdocs is to tailor the experience to meet the individualized needs of its appointees. To this end, the goals of the postdoctoral program are to:

1. Provide advanced research training beyond the doctoral degree.
2. Prepare individuals to follow scientific careers in academia, industry, government or other careers that require expertise in biomedical science.

Mentor Obligations

The BPP Advisory Committee recognizes that the postdoctoral experience is a unique "apprenticeship" between mentor and trainee. The obligations of the postdoctoral

appointee and the faculty mentor are well defined in the existing University Policy. The BPP Advisory Committee embraces the concepts of mentorship outlined in the GREAT report which recommends that mentorship go beyond ensuring that quality research is performed and published. The mentor must also have a vested interest in the career development of the individual and must help prepare him or her for the next step in his or her career. Therefore, the BPP Advisory Committee would like to reiterate the responsibilities of the mentor which include the following:

1. Develop a mutually established and definable named project.
2. Encourage presentation of the postdoc's work internally and externally with due recognition.
3. Provide career guidance and set realistic career goals. (see below)
4. Meet regularly to discuss project/career progression.
5. Provide a formal annual review of project/career progress.
6. Apprise themselves of all University policies regarding postdoctoral appointments.
7. Inform postdocs of all mandatory training sessions.

Career Development Guidelines

Mentors should encourage postdocs to:

1. Manage their own project, which should lead to a first author publication.
2. Learn chosen scientific discipline/field.
3. Learn technical skills.
4. Learn ancillary skills, e.g. writing, public speaking, networking, etc.
5. Present scientific work both inside and outside the University.
6. Write up research work for publication.
7. Apply for extramural support, e.g. NRSA postdoctoral fellowships, career development awards, private foundation fellowships, etc.
8. Participate in the review of journal articles and other manuscripts.

Elements of the Postdoctoral Training Program

**See the Appendix-
Postdoctoral Training
Template.**

All Biomedical postdocs come to work with an elected mentor on a specific problem in order to become experts in their chosen field. However, the BPP Advisory Committee has identified Core and Optional Elements that should be incorporated into the postdoctoral training experience if these individuals are to be successfully prepared for their career. Core Elements are restricted to mandatory training sessions (e.g., Bioethics, radiation safety and chemical hygiene training) and elements deemed “essential” to all postdoctoral training. Current NRSA guidelines stipulate that Responsible Conduct of Research training is mandatory for all postdoc trainees and the University also requires safety related training. In addition, the Advisory Committee recommended that it was essential that all postdocs give a public seminar on the research they have performed and develop competency in scientific writing. Public speaking and writing skills are fundamental to being a successful scientist. Postdocs deficient in these skills should be encouraged to take the optional elements of the program (see below). A list of the core elements recommended by the BPP Advisory Committee and accepted by BPP is given below:

C O R E

E L E M E N T S

1. Bioethics Training
2. Chemical Hygiene, Environmental Health and Radiation Safety Training
3. Research Animal Policies, Practices, and Procedures Training¹
4. Human Subject Research Training⁶
5. Public Seminar on Research
6. Competency in Scientific Writing
7. Regular Attendance at Seminars

Optional elements recommended by the BPP Advisory Committee include participation in research success skills training, continuing education opportunities, career guidance programs, and career development opportunities. Participation in these elements requires time outside the laboratory and it is the responsibility of the postdoc to schedule this time with their mentor. It is the responsibility of the mentor to provide appropriate time for the postdoc to attend these sessions provided that the postdoc is meeting his or her research obligations to the laboratory. The GREAT report, and a number of our own postdocs, emphasized that these opportunities are expected by postdocs in lieu of compensation.

¹ Individuals not conducting animal or human subject research are exempt from this training.

The BPP Advisory Committee identified specific research skills as parts of a key skill set for succeeding in an independent research career. These “Research Success” skills include how to write a scientific article and grant, how to handle peer review, and how to establish and manage a laboratory including its finances and resources. Continuing education involves participation in course work that will complement the research experience of the postdoc, participation and presenting at scientific conferences or training in specialized techniques not offered by the mentor’s laboratory. While the advisory committee strongly recommends that proper career guidance be given to postdocs, the mentor may be unable to provide this guidance if the career path chosen is outside the traditional academic route. Because of this need the OPP ran a highly successful pilot Career Workshop Series Spring 2000 and has established a formal relationship with the University’s Career Services Office. The Advisory Committee has recommended that the Career Workshop Series and seminars offered by Career Services be optional elements of the training program.

The AAU Report, NRC report and AAAS statistics validate the fact that only a small percentage of postdocs obtain tenure track faculty positions. These career trends indicate that additional career development opportunities should be provided to prepare postdocs who elect to follow other career objectives. Depending on an individual’s career goals, temporary, part-time, internships or apprenticeships in business management, intellectual property, scientific writing, or science teaching may be appropriate. There is also a need to create and identify awards which provide stipend and tuition for postdocs to pursue other advanced degrees e.g., M.BA or M.Ed. in order to prepare them for careers in business or science education respectively.

A list of the Optional Elements recommended by the BPP Advisory Committee and accepted by BPP is given below.

**OPTIONAL
ELEMENTS**

For a more detailed description of these elements see the BPP website page.

1. Research Success Skills
 - Peer Review
 - Scientific Writing
 - Grant Writing/Obtaining Grant Funding
 - Public Speaking
 - Establishing/Managing a Lab
2. Continuing Education
 - Coursework
 - Conference Attendance
 - Specialized Technique Training

3. Career Guidance

Career Workshops

Career Advising and Programming

Biomedical Career Fair

4. Career Development Opportunities (i.e. Internships in technology transfer, business planning, Bioethics, Teaching etc.)

Summary

The Future of Biomedical Postdoctoral Programs

The postdoctoral appointment is a temporary, advanced professional training experience which should prepare individuals for their first permanent position in academia, industry or government. Obtaining permanent positions can be fiercely competitive and as an educational institution we must ensure that our postdocs are appropriately prepared. The presence of an intramural postdoctoral training program that is nationally and internationally recognized for the quality and professionalism of its trainees provides enormous benefit to this institution. These benefits include the ability to recruit the best graduates to our postdoctoral programs at a time when it is increasingly difficult to attract the top candidates. These “stars of the future” will enrich our current research, mentor our future leaders, and bring prestige to Penn.

APPENDIX I

**Policy for Postdoctoral Trainees at the University of Pennsylvania
(Almanac January 15, 2008)**

<http://www.upenn.edu/almanac/volumes/v54/n17/policy.html>

**Policy for Postdoctoral Fellows at the University of Pennsylvania
(Almanac September 7, 2004)**

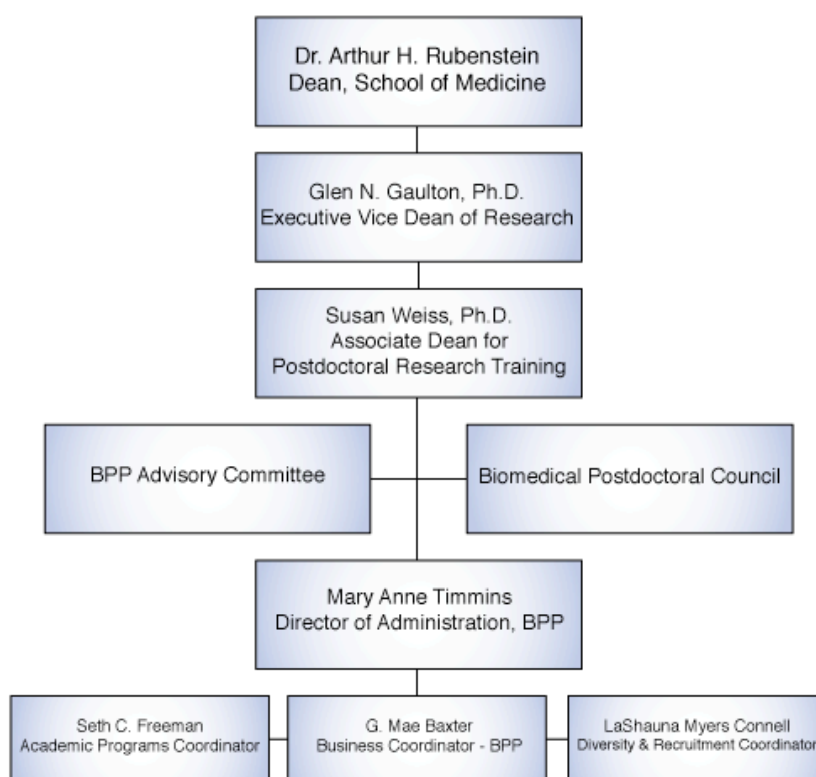
<http://www.upenn.edu/almanac/volumes/v51/n02/OR-postdoc.html>

**Policy for Postdoctoral Fellows in the Physical, Biological, and
Health Sciences and in Engineering**

http://www.upenn.edu/assoc-provost/handbook/iii_g.html

APPENDIX II

Biomedical Postdoctoral Programs Organizational Chart





Postdoctoral Training Template

Core Elements

Supporting ethical and safe research is an essential component of the University of Pennsylvania School of Medicine's research mission. We consider training that addresses Bioethics, Laboratory Animal, Human Subjects and Radiation Safety a mandatory part of the postdoctoral experience. In addition, departments usually provide postdocs with the opportunity to attend lectures, group discussions, grand rounds or journal clubs and it is strongly advised that postdocs attend such sessions to maintain contemporary knowledge of their field and develop collaborative relationships. It is also a fundamental aspect of postdoctoral training to develop competency in oral and written presentations.

Program Element	Description
Bioethics Training	Training is mandatory as indicated by current PHS guidelines and is commensurate with current NIH Responsible Conduct of Research requirements. The online Bioethics Training Program is an electronic version of the former didactic workshop. It includes lectures on such topics as (i) misconduct in science; (ii) human subject research; (iii) research involving animals; (iv) ownership of intellectual property and data; (v) responsible authorship and (vi) peer review. The program includes a list of all URLs that link to University and Federal policies on these issues. It also contains a series of case studies dealing with topics not covered e.g. conflict-of-interest, with on-line questionnaires. All BPP Postdoctoral Appointees must complete the online Bioethics Training within their first year at Penn.

Laboratory, Occupational and Radiation Safety Office of Environmental Health & Radiation Safety	<p>The following training programs are required by the Occupational Safety & Health Administration (OSHA) for all employees who work with hazardous substances including: chemicals, human blood, blood products, fluids, and human tissue specimens. Attendance at one or more sessions is required depending upon the postdoc's potential exposures.</p> <ul style="list-style-type: none"> • Introduction to Laboratory and Biological Safety • Laboratory Safety-Annual Update • Intro to Occupational Exposure to Bloodborne Pathogens • Laboratory Safety-Bloodborne Pathogens Annual Update • HIV/HBV Training • Hazard Communication • Laser Safety • Shipping and Packaging Infectious and Biological Substances <p>Radiation Safety Training for new postdocs that work in labs with radioisotopes can be completed on-line. Annual Radiation Safety Training must be completed each year after taking the initial training.</p>
Orientation to Animal Research University Laboratory Animal Research	<p>This half day workshop must be completed upon arrival or as needed for postdocs working with laboratory animals.</p>
Human Subject Research Training	<p>New federal policies will mandate separate and identifiable training in human subject research and procedures. Currently, Bioethics training deals with issues of informed consent and study design. In addition, all postdoctoral appointees must complete the online HIPPA training program provided by the Office of Human Research.</p>
Public Seminar on Research	<p>Postdocs should present a talk on their current research during a departmental seminar, research retreat, or local or national conference before the completion of their postdoc training.</p>
Develop Competency in Scientific Writing	<p>Postdocs should be the primary author of a paper on original research, a review article, book chapter or fellowship application before the completion of their postdoc training.</p>
Regular Attendance at Seminars	<p>Postdocs should regularly attend appropriate forums (seminars, small group discussions, grand rounds, or journal club) to broaden their scientific knowledge</p>

and develop collaborative relationships in the scientific community.

Optional Elements

Research success skills, continuing education opportunities and career guidance and development can be critical components of preparation for a successful independent scientific career. Participation in these elements requires time outside the laboratory and it is the responsibility of the postdoc to schedule this time in advance with his/her mentor.

Research Success Skills

The following skills have been identified as important skills for succeeding in an independent research position.

Program Element	Description
Peer Review Postdocs must understand the process of peer review and take it into account when preparing scientific papers, articles and grants reviewed by peers.	Peer Review is addressed in Biomedical Postdoctoral Programs Research Success Skills Series. A group of lectures that is offered every other year.
Scientific Writing Postdocs should learn how to prepare articles, abstracts, poster presentations, and review articles.	Scientific Writing is addressed in the Biomedical Postdoctoral Programs Research Success Skills Series. A group of lectures that is offered every year. In addition, BPP offers an online writing program for biomedical professionals three times a year. The course is fourteen weeks long and is taught by Penn's English Language Programs (ELP). There is a fee associated with this course that is paid directly to ELP.
Grant Writing/Obtaining Grant Funding This specialized type of Scientific Writing is important in order to learn how to assess and choose the most relevant funding opportunities, but also to understand what style, content and format is needed for acceptable submissions.	Grant Writing is addressed in the Biomedical Programs Research Success Skills Series. A group of lectures that is offered every year. The Office of the Vice Dean for Research and Research Training sponsors an annual seminar each year called the "Art and Science of Obtaining Federal Funding". The purpose is to educate faculty and researchers on various funding opportunities. Topics addressed include procedures on preparing a grant, available sources of support for research, and where to get help at the University.

Public Speaking

Postdocs need to master public speaking skills. This includes the ability to communicate a variety of presentation formats effectively, from a ten-minute talk to a one-hour scientific seminar.

Public Speaking is addressed through a series of workshops offered every year with Lisa B. Marshall, www.lisabmarshall.com.

The large group seminars expose the post-docs to an effective technical presentation organizational structure, show them how to develop and practice "hallway" mini presentations, and explain effective design strategies for communicating scientific information.

Through the presentation workshops (small groups) postdocs can experiment with and develop their speaking, presentation and interpersonal communication skills in a "communication laboratory". The workshops provide an invaluable and rare experience of presenting scientific work to other biomedical professionals in a supportive, educational environment. Attendees also gain by deepening and broadening their understanding of their colleague's work.

<p>Establishing/Managing a Lab</p> <p>Understanding how to create budgets, supervise staff, and build collaborative networks in one's field and institution requires a foundation in the following skills:</p> <ul style="list-style-type: none"> -Fiscal Management -Hiring/Managing Lab Personnel -Networking/Collaboration 	<p>How to establish and manage a laboratory is addressed in Biomedical Postdoctoral Programs Research Success Skills Series. A group of lectures that is offered every year.</p>
<p>Biomedical Postdoc Research Symposium</p> <p>It is important for postdocs to learn how to present their research to a group of their peers.</p>	<p>Postdocs have an opportunity to present their research either in a lecture or poster format at this annual symposium in the fall. The event is organized by Biomedical Postdoctoral Programs and the Biomedical Postdoctoral Council.</p>

Continuing Education

There may be skills that a postdoc needs that he or she is not able to obtain working at the bench in his or her current lab.

Program Element	Description
<p>Coursework Opportunities</p> <p>Continuing Education credits may be critical for maintaining a license or certification. In addition, some training grants may provide funding for coursework specific to the training mission. Postdocs may choose to take an undergraduate and graduate course at Penn or a local college to enhance their own research experience and knowledge, however there is no tuition benefit for postdocs.</p>	<p>Opportunities to obtain Continuing Education (CE) credits are available through courses and conferences. Additional educational opportunities exist for postdocs to enroll or audit an undergraduate or graduate course at Penn or another university. Mentor permission required.</p>
<p>Conference Participation</p> <p>Conferences provide an opportunity to learn contemporary topics in a specific field, network with colleagues, and present research for peer review.</p>	<p>Opportunities exist to attend local/national/international scientific meetings. Optional registration for Continuing Education credits may be available. Conference attendance should be mentor approved and may be mentor sponsored. Conferences may offer scholarships for postdocs. Postdocs would initiate an application for this type of support.</p>
<p>Specialized Technique Training</p> <p>Training in a specific scientific technique that is not in the current skill set of the lab may be needed. Another lab or institution may have a program that teaches this skill.</p>	<p>Technical skills that are critical for performing specific research may be identified by the Mentor.</p>

Career Guidance In preparation for an independent career, postdocs need to build a career plan. Postdoctoral appointees may need career advising and job search skills to identify and pursue job opportunities.

Program Elements	Description
Career Workshops The workshop series is designed to provide updates on current market trends, critical job search skills, types of employment opportunities, as well as to provide insights into the personal experiences of Penn postdoc alumni.	Biomedical Postdoctoral Programs sponsors a career workshop series every other year which is dedicated to examining trends in the job market, and reviewing basic job search skills, and discussing the career experiences of individuals working in academia, industry, or alternative fields.
Career Advising and Programming Postdocs need to know how to best design their CV/resume, handle interviews, write letters, research job opportunities, balance careers and personal lives, and network. One-on-one advising sessions allow postdocs to develop personal search strategies, get their CVs reviewed, or practice interviewing.	The University's Career Services Office provides seminars, one-on-one advising, interview practice sessions and access to career library resources. Additional programs on a variety of topics are sponsored by the University's Career Services Office on an on-going basis.
Biomedical Career Fair As the job market evolves and provides increasingly diverse opportunities for our postdocs, the Fair will introduce them to potential future employers in all fields.	The Career Fair will be held annually in the Fall to allow postdocs to meet employers from a variety of fields (biotech, pharmaceutical companies, education, alternative careers, etc.) who are interested in hiring candidates with advanced degrees and postdoctoral experience.

Career Development Opportunities

Additional experience in scientific writing, business management, intellectual property, teaching, etc. may be necessary for the postdoc to attain his or her career goals.

Program Elements	Description
Career Development Opportunities	Temporary, part-time, internships or apprenticeships in a variety of fields and skill areas are available to postdocs (Note: It is strongly recommended that senior postdocs only- 3 rd to 5 th year-participate). Eligibility requires permission from the mentor. Postdocs must concomitantly fulfill their research obligations to the mentor as well as complete the core elements of the postdoctoral training program.