Professional development resources for trainees in the biomedical sciences

**Career Development Resources.** The Biomedical Research Education and Training (BRET) Office of Career Development (https://medschool.vanderbilt.edu/career-development/) provides career and professional development services and enrichment activities for PhD students and postdoctoral fellows in the biomedical and biological sciences. All trainees, regardless of stage, may take advantage of monthly PhD Career Connections seminars that feature alumni pursuing a variety of scientific careers, the Annual Career Symposium and the Beyond the Lab video series (https://medschool.vanderbilt.edu/career-development/beyond-lab). Trainees can also schedule individual career counseling appointments and practice job interviews.

Additional professional development activities are available through the Office’s ASPIRE Program (https://medschool.vanderbilt.edu/aspire/), developed from a Broadening Experiences in Scientific Training NIH Award. ASPIRE comprises three ordered phases - IMPACT, EXPLORE and ENHANCE. First-year PhD students participate in IMPACT, which exposes them to various topics on professionalism through weekly, mentor-led small group discussion sessions over an entire year. During EXPLORE, second or third year students can participate in ASPIRE to Plan and/or ASPIRE to Connect. In ASPIRE to Plan, trainees participate in guided self-assessment of their strengths and work-related values, explore career options for scientists, and set goals for their career development. ASPIRE to Connect is a half-day workshop during which industry professionals and faculty advise trainees about building and maintaining professional relationships. During the ENHANCE phase, appropriate for students who have passed their qualifying examination, trainees can expand their skill sets through ASPIRE Modules and in-depth exposure to specific careers through ASPIRE Externships and Internships. ASPIRE modules are short, non-credit bearing electives in three theme areas: business and entrepreneurship, communication, and clinical research. Externships are job-shadowing experiences and internships provide hands-on experience with a project in a professional work environment. Postdoctoral fellows are invited to participate in all ASPIRE activities except IMPACT. Finally, the Aspire Café for Postdoctoral Fellows has been developed to tailor career planning presentations specifically for this stage of training. Café sessions, led by staff and/or faculty (https://medschool.vanderbilt.edu/aspire/aspire-cafe-postdoctoral-fellows), are held on a different topic each month. In addition to providing an overview of all ASPIRE and Career Development resources available to postdoctoral fellows, sessions feature topics such as converting your CV into a powerful résumé, networking strategies, writing a winning cover letter, informational interviewing, finding funding for your research, leveraging LinkedIn, preparing a teaching demo, developing interviewing skills, becoming a mentor, and assembling a successful job application package.

**IDPs for postdoctoral fellows.** Vanderbilt University School of Medicine has required completion of an IDP from postdoctoral fellows since 2008. The annual IDP has been, and will continue to be, a required component of the annual reappointment process, ensuring 100% compliance. The postdoc IDP covers issues such as productivity (publications, meetings attended), a listing of competencies developed over the previous year, career planning over the last year, and an evaluation of whether they are satisfied with their progress. The postdoc also sets detailed research and career goals and expectations for the upcoming year. The document concludes when the advisor records his/her expectations and plans for facilitating the postdoc’s career development in the upcoming year. The postdoc and mentor must acknowledge each other’s views by discussing and each signing the document.

**The Vanderbilt Postdoctoral Association (VPA).** The VPA, formed in 1998, has successfully united postdoctoral research fellows from the basic science as well as clinical departments. The many benefits to participating in the VPA range from networking, learning organizational skills
such as creating agendas, chairing meetings, and taking official minutes, to furthering communication and leadership skills. The VPA works closely with the BRET office of career development to expand and enhance career planning programming tailored for postdocs.

**IDP for PhD graduate students.** Following new NIH guidelines, the BRET office of career development developed IDPs for graduate students compatible with program-specific evaluation forms already in place. The student IDPs, like the postdoc IDP, are required annually of all School of Medicine PhD students and administered centrally through the BRET office; compliance with the completion of an annual IDP is also monitored by the BRET office. The student IDPs begin with a self-review of general expectations and responsibilities for each stage (year) of training, a self-assessment of progress toward career goals, and a self-assessment of current skills in seven core competency areas: (1) scientific knowledge; (2) research skills; (3) communication; (4) professionalism; (5) leadership and management skills; (6) responsible conduct of research; (7) career advancement. Students then set specific goals for professional development within the coming year and finally discuss the form with the advisor. Advisors identify additional expectations (if any), review the IDP, and provide feedback to the student. The student and the research advisor jointly sign and then file the IDP signature page with the BRET office. The IDPs were launched in May 2014 and are executed in May of each year.

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