Establishing career platforms for postdocs through individual development plans

Jonathan Gitlin is a member of the National Postdoctoral Association and currently serves on their Board of Directors as Vice Chair. He is a postdoc at the University of Kentucky, where he is studying the role of COX-2 in cardiovascular disease. Here he discusses the Association and some issues addressed at its recent national meeting in Boston, MA, USA.

Postdoctoral researchers make up a significant proportion of the academic research workforce. Shifts in demographics and funding booms in the past have resulted in many more postdoctoral than tenure-track faculty positions. In 2003, the National Postdoctoral Association (NPA) was formed in order to improve the postdoctoral experience in the USA, and for the past five years has been working with stakeholders such as the National Institutes of Health (NIH) and the National Science Foundation (NSF) to advocate for positive change.

In the 1980s, one-quarter of R01 grants went to scientists below the age of 35; currently that figure is less than 3%. The average age of faculty personnel has risen, from scientists in their 40s to those in their 50s, and where once the idea of Principal Investigators (PIs) in their 70s was almost unheard of, the trend is now growing.

The end result is an abundance of recently trained young scientists – the vast majority of whom will not land a traditional faculty position, despite that being the main focus of their training. With over 80% of these scientists moving into non-tenured positions, whether they be in industry or fields peripheral to research, there is a pressing need for them to develop the kinds of translational skills that simply cannot be provided by spending all of their time at the laboratory bench.

With this in mind, many of the sessions at the recent, annual NPA meeting focused on ways to help young scientists develop these skills. One method that is quickly gaining needed acceptance is the adoption of individual development plans, or IDPs (http://opa.faseb.org/pdf/idp.pdf); postdocs taking part in the IDP process complete an annual assessment with their mentor in order to guide them during their training. Typically these assessments require postdocs to take a critical look at their own performance, and identify what they see as their medium- and long-term career goals. In consultation with their mentor, they then create a development plan including things such as specific skills to be developed and a timeline with milestones so that progress can be evaluated along the way. This plan outlines the postdoc’s goals and helps him or her to develop the foundation that will support their future career.

Data gathered over the past few years, such as the Sigma Xi ‘Doctors without orders’ report (http://postdoc.sigmaxi.org/results/), have shown that postdocs who have IDPs publish more material, and consider their careers to be more satisfying, than those without IDPs. The Sigma Xi survey suggested that implementing an IDP had the same effect on a postdoc’s personal well-being as a $20,000 pay raise! Considering this, it is not hard to imagine that the implementation of IDPs will quickly become much more widespread. The NSF’s new funding guidelines require grant holders to take the concept of mentoring more seriously than they have in the past.

Postdocs and faculty members reading this article should not necessarily wait for funding bodies or institutions to mandate an IDP policy; postdocs who publish more papers and enjoy better job satisfaction inherently benefit the careers of their mentors as well as their own, so instigating a development plan creates a win-win situation. As part of its efforts to improve the postdoctoral experience, the NPA is developing a core competencies document (http://www.nationalpostdoc.org/site/c.eo/MIWOBiH/b.1390015/apps/s/content.asp?ct=5237389) outlining a range of skills that should be expected of researchers – in a similar manner to those used in medical training. The organization hopes this will bring much needed clarification of expectations and standardization of goals to training scientists and their mentors.

A sample outline of an IDP can be observed on the Federation of American Societies for Experimental Biology’s (FASEB’s) website, at http://opa.faseb.org/pdf/SampleAnnualReview.pdf.

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Comments from the European Molecular Biology Laboratory

Iain Mattaj is the Director General of the European Molecular Biology Laboratory (EMBL), which is a publicly funded basic research and molecular biology laboratory in Europe. EMBL consists of approximately 85 independent research groups contained in five separate facilities throughout Europe. In this brief interview with DMM, Dr Mattaj presents some of EMBL’s approaches to advancing scientific research.

Are there certain philosophies that EMBL uses to guide its selection of internal scientists to create an environment that is particularly conducive to medical research?

EMBL is a basic molecular biology research institute first and foremost, so we do not favour medically related science per se. However, given the enormous insight into biological systems made possible by recent advances in life science research, much of basic biology is rather directly disease related. This means that many of our scientists are, or become, very interested in the medical implications of the work they are doing, and what we try to do institutionally is to make it easier for our researchers to make contact with clinically orientated collaborators via our Centre for Disease Mechanisms, which organises workshops with a mix of basic and clinical speakers, and institutional partnerships.

What qualities do you look for when choosing your external partnerships?

Scientific quality, complementarity to EMBL’s own science and a willingness to adopt aspects of EMBL’s scientific culture, such as international recruitment, early independence, external review by recognised leaders and a staff turnover policy.

Is there anything that you would like to add about EMBL’s roles that are relevant to the model organism research community?

The EMBL Monterotondo outstation is focused on mouse biology and mouse models of human disease, and participates in many European initiatives aimed at more effective coordination of the construction and analysis of mouse mutants. In addition, the EMBL-European Bioinformatics Institute (EMBL-EBI) data resources are of course crucial for researchers everywhere working with model organisms.

Frequent publications in DMM will include personal perspectives from leaders of institutions, organizations and funding agencies about the qualities they look for in recruiting, funding or enabling medical research.

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