

pressure. “When we are asked for urgent advice, we work around the clock for days,” says Gawlik.

AGENCY SCIENCE

At EU regulatory agencies, scientists are tasked with rigorously testing potentially opposing claims concerning health and the environmental risks of drugs, chemicals and foodstuffs. The EMA, for example, evaluates applications for marketing authorizations of medicines and monitors the safety of approved drugs across their life cycles. “Our role is to ensure safe, effective and quality medicines for patients, who may need new treatment options,” says Pavel Balabanov, a Bulgarian neurologist who joined the EMA in 2008 after six years of clinical experience. “I really liked working with patients. But here, I can work for the benefit of many thousands of patients instead of just a few.”

Regulatory-driven research requires an interest in research methods (including statistics), project-management skills and a solid understanding of the regulatory framework in which the agency operates, says Marta Hugas, EFSA chief scientist.

The agency provides the EC, the European Parliament and EU member states with scientific advice on health risks related to human and animal food. EFSA scientists must handle and communicate uncertainty and sustain an evidence-based position in public debate over controversial issues such as the safety of genetically modified crops, says Hugas. The agency currently employs about 200 biologists, chemists, toxicologists, plant researchers, nutrition researchers and veterinary scientists who are in steady consultation — and who often become coauthors of meta-analysis and review articles — with leading experts in their fields. It plans to hire up to 100 scientists over the next few years. “We are looking for rigorous researchers at any career level who are interested in risk assessment for the public good,” says Hugas.

A traineeship at an EU agency raises young scientists’ employability, Hugas adds. Chemist Alessia Amodio, now an EFSA trainee, wanted something new after two years of postdoctoral research in nanotechnology at the University of Tor Vergata in Rome and the University of Melbourne in Australia. She enjoys the variety of tasks in regulatory-driven science, but hasn’t yet decided whether she prefers ‘desk’ science over bench research. She hopes that her experience in both worlds will open doors to whatever career path she might choose.

“I’ve been through many challenges and I’ve learned many new things,” she says. “I’m not scared at all about what might come next.” ■

Quirin Schiermeier is Nature’s Germany correspondent in Munich.

COLUMN

Forge your own path

Propose a fellowship that can propel you into your ideal career, say **Crystal M. Botham** and **Tanya M. Evans**.

Looking to win a US graduate or postdoctoral research fellowship? Don’t focus only on your current research: you’ll need a proposal that outlines your specific goals for career development and training.

Most US fellowships, such as the National Institutes of Health’s National Research Service Awards, support research-related and professional activities. These might include taking extra courses or giving a talk that will enhance the award recipient’s training experience and improve their potential for success. But the most common mistake we see applicants make in our coaching sessions (and that we made ourselves) is to focus only on their research. That’s just one component of a winning application.

We encourage graduate students and postdocs to design a path that will complement their previous training and help to propel them towards their next career stage. We’ve developed an outline for incorporating training goals into fellowship proposals. Here are the basics:

- Write down what type of scientist you want to become. Are you aiming for an academic career at a research-intensive institution, a career with a focus on teaching, or do you see a non-academic path in science? Which research area most intrigues you? What approaches and methods excite you? It is also helpful to list the publications, grants and presentations that could emerge from this training opportunity.

- Describe experiences or outcomes that show your potential. Emphasize the evidence for your high potential by noting the publications, awards and research you have that illustrate creativity or technical skills. We know from experience that it is easy to be discouraged at this point, but your history, which defines who you are today, is not everything.

- Highlight career growth and development areas that need attention. We have noticed that trainees who are able to delineate gaps in training, or in the experience they need to move on to their next career stage, are highly successful at documenting the need for and value of the proposed training. We recommend describing 3–5 training goals, such as obtaining specific technical training, gaining laboratory management skills or establishing new collaborations.

- Design a thorough training plan. Anchor this plan around your goals to address specific areas for growth. You can include campus-seminar series, visits to a collaborator’s lab to learn a technical skill, oral or poster presentations



at scientific conferences, courses on specific research topics or professional-development skills such as management or scientific writing, mentoring or teaching. Throughout the proposal, you must make a compelling case that your future success depends on your getting this and career-development and research training. Explicitly state, for instance, that you need the proposed technical skill to complete one of your specific aims and future research goals.

We’ve found that discussing specific goals is crucial for successful fellowship applications. For example, we coached a postdoc on revising a proposal that reviewers had described as having a “cookie-cutter training plan”. It listed proposed activities without linking them to the postdoc’s background and trajectory.

In the revision, the applicant described how the plan addressed their specific training goals: to cultivate a certain technical skill, for example, the postdoc would complete specific coursework and work in a collaborator’s lab for three months. The proposal was funded.

Remember, too, that the exercise of completing this application is useful; even if you don’t win the grant this time, the experience that you gain will make you a stronger contender for the next one. Perhaps even more importantly, you will be armed with a clear plan for reaching your career goals and research milestones.

Crystal M. Botham directs the Stanford Biosciences Grant Writing Academy at Stanford University in California. **Tanya M. Evans** is a neuroscientist at the University of Virginia in Charlottesville.