

TURNING POINT

Ethan Perlstein

Ethan Perlstein has spent five years creating a sub-field of research that he calls evolutionary pharmacology. As his fellowship at Princeton University's Lewis-Sigler Institute for Integrative Genomics in New Jersey comes to an end and he searches for his next academic post, Perlstein is maintaining an innovatively designed website adorned with modules and discussion threads to help to communicate his thoughts on science.

When did you first start fostering communication among scientists?

I was an intern at a small biotech company before my final year of high school. As part of that, I would read immunology articles, formulate questions and start a correspondence with the author. One of these authors was Ronald Germain, an immunologist at the US National Institutes of Health. He must have been struck by the idea of a kid reading papers; he offered me another internship, in his lab in Bethesda, Maryland, where I worked for the summer before going to Columbia University in New York to study sociology.

How did you come to champion evolutionary pharmacology?

After several rotations in different labs as a cell-biology graduate student at Harvard University in Cambridge, Massachusetts, I realized that I wanted to work with small molecules relevant to human diseases. I also wanted to use a simple model system, such as yeast, so that I could do a lot of experiments quickly. I noticed that several small molecules that affect yeast growth are also psychiatric drugs, and I started studying the connection. There is a large evolutionary distance between yeast and humans, but these drugs affect ancient processes that we share.

How is your job search going?

Like many of my colleagues, I have been battered by the job market. I received zero interviews out of 18 applications this year, despite having a five-year independent position with a US\$1-million budget on my CV. The fellowship has been great, but it is not a normal postdoc, so I am not sure that the wider community of scientists knows what to make of it. I am a research cross-pollinator, and don't have one well-known area of expertise. I wonder if it may be harder for me to break out.

Has your decision to invest time, money and energy in your website paid off?

I think so. Most academics use a lab website



to list publications; essentially it becomes static, a version of their CV. I wanted to do something new and cool that would help to communicate science. I am not a programmer, so I spent several thousand dollars of my own money on hiring a professional design team to create something interactive. It includes my tweets, blog posts and research summaries — replete with pop-culture references — in a series of modules that encourage viewers to add their own comments. It seems to work: one private-sector researcher who checked out my website contacted me about mutually beneficial research opportunities.

One post on your website breaks down your academic lab budget. Why share this?

My fellowship finishes at the end of the year, and I am interested in crowd-funding a project on how amphetamines such as crystal meth work. I am asking for roughly \$25,000, and I thought that I should give potential funders evidence that I am responsible with money. I see this as part of the same movement as a group of scientists who are posting their grant proposals — whether they are successful or not. I am excited about experimenting with the way we do science.

What has been your career turning point?

Without a doubt, joining Twitter in 2011, when I started offering my thoughts about changing the way science is done. I found a community of people passionate about rethinking scholarly publishing and funding. I had hoped for a way to scale up the e-mail cold-calling that I had done at high school. Twitter was a way to connect with like-minded people and keep a conversation going 24/7. ■

INTERVIEW BY VIRGINIA GEWIN

FUNDING

People power

Researchers are starting to turn to crowd-funding as a way to support their work, says Simon Vincent, head of personal awards and training at Cancer Research UK in London. At the 20 September Naturejobs Career Expo in London, Vincent said that in a lean funding environment, seeking donors can be easier than navigating the grant-application process. "There's no peer review or middlemen," he told conference attendees. "If you have a good idea and can convince enough people, you get the money." But Vincent warned that crowd-funding — seeking funds through the online community — also has downsides. Traditional research-grant peer review provides quality control, a reality check and a way to hone and refine an idea, and the interaction with the funder can provide links to large, established networks in the scientific community. Crowd-funding, even with established sites such as petridish.org, requires a lot of time and public interaction, Vincent said. Scientists often have to make a video about their research project and must stay in regular contact with donors, who can number in the hundreds.

ETHICS

Relationship advice

A university conflict-of-interest committee should review contracts between academic scientists and industry sponsors that are worth US\$5,000 or more, concludes a draft report entitled Recommended Principles & Practices to Guide Academy-Industry Relationships. Researchers should never ghostwrite research papers and should retain oversight of intellectual property and a stake in the proceeds from patents, according to the proposal. The report offers 56 guidelines for maintaining academic freedom and upholding ethical conduct in partnerships and collaborations between academics and industrial sponsors. Issued on 18 September, it was written by the American Association of University Professors in Washington DC in response to the increasing number and complexity of such partnerships, says co-author Cary Nelson, a past president of the association. "The corrupting power of money has become much more clear," he says, noting that issues such as sponsors suppressing data from studies and persuading eminent researchers to add their names to papers they did not write seem to be on the rise.