Last month, 65 Nobel laureates gathered in Lindau, Germany, for an annual exchange of knowledge between these most honored scientists and a group of selected young researchers from around the globe. To extend the reach of the conference, Science hosted a webinar to address a common concern of young scientists everywhere: persevering in science. Some advice on this topic may have been unexpected.

Elizabeth Blackburn and Jack Szostak (both 2009 laureates in Physiology or Medicine, for the discovery of how chromosomes are protected by telomeres) and Daniel Shechtman (2011 laureate in Chemistry, for the discovery of quasi-periodic crystals) fielded questions submitted from more than 3100 young scientists who registered for the discussion.

Not lost on these Nobelists was the discouragement that young scientists feel about their career prospects. Many find themselves in serial postdocs for many years while fielding rounds of rejection letters for academic positions. In the face of this disheartening situation, there was some tough advice. Given the current competitive climate for hiring and advancement, the panel agreed that young scientists who are not deeply passionate about their research need to reconsider their career choices. And even if one has such extraordinary passion, it alone is not enough. The panelists stressed the importance of becoming a leading expert in something new and in demand. They also emphasized the need to hone people skills, as science is more and more a team effort, and to become able communicators in order to share goals and achievements with potential funders and the public. Graduate students also need to be smart in selecting a lab for postdoctoral training; ideal attributes are a collaborative atmosphere, opportunities for leadership in publications, and exposure to more than just one senior leader in the field who will be able to write a letter of recommendation.

Certainly, the path to a successful academic career, no less to a Nobel Prize, is not easy. The panelists also faced obstacles, periods of self-doubt, and career setbacks. But if a young scientist faces despair from too many failed academic job searches, one panelist had some tough advice: It’s time to reassess options as to whether academia is the right track. The panelists encouraged thoughtful consideration of industry and government research labs, because in many cases, they offer more stable funding, and an impressive number of Nobel laureates came from these environments.

A large part of persevering in science is balancing a demanding scientific career with personal life. Panelists emphasized the importance of flexibility; adjusting one’s scientific career to meet the needs of a family, for example. I certainly resonated with this advice. A seagoing oceanographer early in my career, I decided to move into a different position that allowed me to stay ashore when my three daughters reached the age when having their mother home regularly really mattered. Once they all were done with college, I was open to job opportunities for which more time away from home was required.

For young scientists in particularly competitive fields, they are challenged with doing everything they can to stand out from the crowd. In this regard, I am delighted by the growing number of events that are devoted to helping young scientists network with very influential leaders who might help advance their careers (such as the Lindau Nobel Laureate Meeting) and prizes that recognize the early-career accomplishments of young scientists (such as the SciLifeLab Prize and the Eppendorf Prize, both of which are administered in conjunction with Science). Advisors and mentors may not have the time to look out for such resume-enhancing possibilities for their trainees. I encourage ambitious young scientists to investigate these opportunities.

Many Nobel Prize winners spoke about their “good luck,” but on closer inspection, in most cases, they had created the conditions for their own good luck to happen.

– Marcia McNutt

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