

Mentors, influences and role models

The responsibility of research supervisors to act as mentors is a common theme today. But mentoring takes many forms and should not be separated from acting as role models for those around us. The importance of this influence recently became more apparent to me, when Jack Gorski—my first postdoctoral supervisor—died.

I wrote to Jack in 1972, to ask if I could work in his laboratory at the University of Wisconsin. He replied that he thought my CV was fine, but was concerned that I did not know him or what it would be like to work in his laboratory. This was in the days when transatlantic flights were a major expense for a young biologist, so Jack gave me a list of his former postdoctoral researchers and suggested that I contact them to ask about their experiences; their glowing reports convinced me to join his group.

Jack did not mentor in a formal sense, he was simply himself: decent, caring, driven by science rather than by ego, and taking care of those in his laboratory at all times. For example, after only a few months in his laboratory Jack asked me to co-author a review with him—this helped me to become familiar with the recent literature and to promote my career. He was also a great scientist. Famous for making the major discovery that the oestrogen receptor is a protein located not in the cell membrane but in the nucleus, he spent years challenging this key insight in order to make the case watertight. Scientific honesty was of prime importance to him.

All of these traits influenced those who worked with Jack; today, however, being yourself does not seem to be sufficient. Group leaders are increasingly expected to act as responsible supervisors who guide and mentor their students in a structured way. We are advancing towards a stage at

which mentoring abilities will be assessed in the same way as teaching abilities. One day, there will be a form to fill out that lists questions such as: Did you discuss alternative career paths with your graduate students and PhD candidates? How did you solve personality clashes in the laboratory? Did you provide PhD students who work on risky research projects with a safe alternative in case their projects failed? Did you advise your postdoctoral researchers on different research options? How did you prepare your postdoctoral researchers for life as independent scientists? And so on. As wave after wave of codes of best practice flood into the laboratory, such a questionnaire—coupled with an assessment of the mentor by the persons mentored—could give rise to a certificate of 'competence' that must be renewed every few years in order to continue running a research group!

This might sound like a far-fetched scenario, but similar assessments to monitor the performance of lecturers are already commonplace at many universities. The logic is that if a university employs people who spend most of their time teaching students, it has the right to ensure that they perform well. But there are negative consequences: students are increasingly spoon-fed with lecture notes, and lectures cannot deviate from a fixed programme that is inextricably linked to a timetable, a curriculum and specific examination topics. Under pressure to please students and ensure that they pass their assessments, lecturers are less likely to draw from their own experiences to transmit their enthusiasm for a given subject and might simply revert to an advanced form of high-school teaching. Although the above-mentioned questionnaire is hypothetical, adding mentoring to group leaders' duties and then monitoring their performance could also have negative consequences if taken too far.

I do not deny that mentoring is useful and that it needs to be improved, given the influence that group leaders inevitably have on their team. However, in reality, this influence is more pervasive than any formalized mentoring session. Students and junior scientists acquire more than just scientific training in the laboratory, and will carry these lessons—positive and negative—through life. Does the head of the laboratory treat the students and postdoctoral researchers with respect or as pawns to advance his/her own career, sacrificing students on internally competing projects? Does the supervisor attempt to be selective with data or use information from a paper they reviewed to propel their own research? Or does the group leader promote honesty, diligence and generosity, and provide support for those at a delicate point in their career? Such experiences have an indelible effect on young scientists. Thus, the personality and intrinsic values of the supervisor are clearly relevant, perhaps more than the input they provide in formal mentoring sessions.

This brings me back to the time I spent with Jack Gorski. He was extremely critical of data, modest and friendly to everyone, and he promoted the careers of all who worked with him. His intrinsic decency has had a life-long and important influence on me and his other students. Those scientists who have had similar mentors now have the responsibility to pass this message on to the next generation: research is about the excitement of discovery and understanding, it is not a matter of winning at all costs. Even without formal mentoring, being a good role model can be crucial in making science an attractive choice for young students, and in preparing them for productive and influential careers.

Frank Gannon

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