

Mentoring mismatch



Is your adviser not the role model or mentor of your dreams? Then take charge of the situation and find the right people. **Kendall Powell** plays matchmaker.



Paul's* graduate supervisor stood beside his bench yelling at him about a failed experiment. Sadly, this was nothing new. But Paul knew that they had reached breaking point when he chased his supervisor into the hallway to continue the shouting match.

"Once you go that far, there's no mentoring going on and no good way back," says Paul, now an assistant professor at a California research institute. Paul took an extreme option — the only sensible one in his case — and switched labs in the middle of his graduate career. He found a mentor who was a valuable source of guidance as Paul made the transition from postgraduate to investigator.

Fortunately, such drastic measures are not the most common solution for bad mentoring matches. A milligram of prevention is worth a kilogram of cure when it comes to communicating your goals and expectations (see *Nature* 422, 784–785; 2003).

Most trainees need several different mentors to serve as role models and to advise them on scientific and career questions. To help meet this need, a growing number of universities are introducing policies that match trainees with mentors in addition to their advisers.

For example, several UK universities have put 'backstop' policies in place for doctoral students in which a secondary adviser acts as a sounding board for the student's concerns. As there is no possible conflict of interest in their publication record or advancement,

Keith Micoli: if you feel uncomfortable bringing up career aspirations during an interview, it won't get easier later.

a secondary adviser or an external mentor can play a key role.

Although advisers can't be all things to their trainees, yours may well give you career advice — but you'll need to ask, says Sunita Jones, a former postdoc and peer counsellor at Stanford University in Palo Alto, California. She says postdocs should not feel like they are under their adviser's control.

"You already have your degree, no one can take it away. This training is for your future and you are in control," says Jones, now a research administrator at St Mary's Hospital in Manchester, UK. If something is not working for you, tell your adviser, who, she says, should also be a colleague by this point.

Aim for comfort

Equally important is starting off on the right foot with a mentor at the earliest stages, says Keith Micoli, chairman of the National Postdoctoral Association (NPA) board and research associate at the University of Alabama, Birmingham.

"You should talk to an investigator before you even accept a lab position," says Micoli. And you should make your career aspirations clear, he adds. "If you don't feel comfortable during the interview to bring it up, it's not going to get more comfortable later." You can also research the NPA's postdoc policy database to find the postdoctoral infrastructure available at more than 100 institutions.

Once you have accepted a position, set out scientific and career goals and reasonable mentoring expectations with your supervisor as soon as possible. Doing so will show you the areas your adviser can

handle and where you'll need a backup. A good place to start is with an individual development plan (IDP), a written framework for regular discussions with an adviser on your scientific and career development.

"If you don't map a course, then you don't know whether you are making progress or running in circles," says Micoli. He notes that IDPs can help introduce difficult topics, such as how much of a research project a postdoc can expect to take with them to their next academic position. IDP-type programmes are being implemented by universities including Stanford and Vanderbilt to improve postdoctoral mentoring. Vanderbilt School of Medicine in Nashville, Tennessee, has proposed that postdocs write an IDP upon arrival, update it at six months, and then redraft it with an adviser each year at re-appointment. Students can also benefit from these regular career-development discussions.

Alexandra could have used just such a system when her graduate supervisor, Tom, went missing for weeks at a time to deal with personal problems. "I was literally doing everything myself," she says. "But when it came to writing up my thesis, I felt totally unprepared."

Luckily, she found a mentor in a former lab supervisor. "He really saved me," she says, of the man who helped her revise her thesis and set a defence date. Yet she notes that Tom was a good scientific mentor, pushing her to do rigorous controls and repeat experiments. Her former lab adviser, on the other hand, was not a good match on scientific aspects.

Hunting down help

Like Alexandra, trainees should recognize their adviser's mentoring strengths and weaknesses, and seek out others who can fill the gaps. International students would do well to find someone to teach them the ropes of a new science system, says Rosana Kapeller, who left Brazil for the United States to do a PhD. Young investigators may not have the time or skills to do this, so look to your peers or someone more established.

Kapeller, now vice-president for research at Renegade Therapeutics in Cambridge, Massachusetts, found help from her department chair. "He helped me navigate the difficult obstacles as a young scientist," she says. Students need to recognize that they may not get everything from their own adviser, says Kapeller.

Jones suggests finding someone more neutral than an adviser as you ponder different careers. "Go across the hall and find a mentor who's going to listen — somebody to bounce things off, someone who won't judge," she says. During her own job search, she created a postdoc transition group to relieve the pressure and stress. The group met every month over lunch to share stories and contacts. When members landed positions — as they all eventually did — they told each other what had worked for them.

Beyond department



Sunita Jones: find someone outside to bounce ideas off.

colleagues, you may want to find someone outside your institution for discussing sensitive subjects or to fill a specific mentoring role. MentorNet is a service that connects college, graduate, postdoc and new faculty protégés with mentors through a one-to-one e-mail system. Last year, about 700 graduate students and 70 postdocs connected with mentors through the non-profit programme.

"An adviser's advice is invaluable, but not always exhaustive," notes Carol Muller, founder and chief executive of MentorNet in San Jose, California. "These are people who can give perspectives and information about alternative career paths or the experiences of women and minorities in science." They can address future plans, doubts and fears you might not want known at your home institution — the timing of having children, dealing with dual-career families, when to publish and move on.

"This unbiased individual is not grading you or sitting on a dissertation or tenure committee. It is completely appropriate to reach out and seek a variety of sources of advice at this stage — these people are the beginnings of a professional network," says Muller.

Perfect match

MentorNet can also match you up with a role model — as in the case of one young engineer who had never met another female, African-American, engineering professor. The programme matches people on the basis of ranked preferences such as gender, ethnicity, institution, location and discipline.

Networkers could also contact interesting seminar speakers by e-mail and join groups such as Women Entrepreneurs in Science and Technology (WEST). Kapeller, a WEST board member, says the best way to make lasting connections is to volunteer for committees with regular small-group meetings.

For exploring alternative career paths that your adviser may not be familiar with, call human-resources departments and ask what they are looking for or search out friends of friends already working in a sector for an informational interview. Alexandra took a 'self-help' route, reading books on handling work stress and communication problems, talking to an occupational therapist, and hiring a career coach.

Jones, Kapeller and others say that good mentoring relationships last a lifetime, get you through big life transitions and prepare you to become a mentor for others. Kapeller says she enjoys shedding light to help people find their own path. "It's about forging relationships and that's always a two-way street."

Even with excellent outside advice, remember that your adviser will continue to be an adviser — sometimes an even better one — when you leave the lab. Paul's second graduate adviser became a valuable confidant once he became a postdoc. And it's likely you will find yourself in your adviser's shoes someday.

"If you look at things from the investigator's perspective and see how you expect them to behave, it's completely different," says Paul. "I never thought I'd be one of those investigators who asks for data when travelling, but the other day I told my technician to send me a text message as soon as my plane landed!"

Kendall Powell is a freelance science writer in Broomfield, Colorado.

*Some names have been changed to protect privacy.



Carol Muller: a network can grow from several advisers.

WEB LINKS

- FASEB's IDP
- ♦ opa.faseb.org/pdf/idp.pdf
- MentorNet
- ♦ www.mentornet.net
- NPA's postdoctoral policy database
- ♦ www.nationalpostdoc.org/policy/institutional