**GRADUATE JOURNAL** 

## Trv. trv again

This summer I had the good fortune to attend a Gordon Research Conference on biomineralization — the way organisms create minerals and turn them into functional structures. The small size of the meeting and its 'off-the-record' policy promoted openness. And the interplay between junior and senior scientists - aided by group dining, multiple poster sessions and a few cold beverages at the end of the day - all but quaranteed frank discussions.

I was excited by the chance to meet successful colleagues from different backgrounds. From industry to academia, from conservative to fringe, no two successful researchers were obviously alike. Some junior attendees noted this wide diversity and wondered what could be the common denominator for success.

One reasonable candidate emerged: tenacity. None of these people seemed the kind that give up easily. My few years in research have not resulted in any easy successes. I can only imagine the number of failures that must be overcome during decades of dedicated effort. I have returned to the lab with new friends, inspiring stories, and a fresh relationship with my veritable forest of failures. I am excited to forge ahead until I too meet with some scientific success.

Sidney Omelon is a PhD student in bone biomaterials at the Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, Canada.

## **Performance reviews**

ike attending a funeral or going to the dentist, annual performance reviews score highly as things to be avoided. Some scientists and researchers go to great lengths, often inadvertently, to get out of the process altogether by never setting a date for a review or by repeatedly rescheduling it until it vanishes completely. If this sounds vaguely familiar, it's time to adopt a new mindset and try a different approach. To get the most from your next review, take an active role, seek clarification and focus on development.

A classic mistake is to assume a passive 'let's see what happens' attitude, expecting your adviser or supervisor to do all of the preparing and presenting. You'll find that reviews work best when you play a proactive role and consider your value on an ongoing basis. Do the leg work throughout the year by



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noting down your achievements. To avoid nasty surprises, seek feedback regularly. Try to anticipate your supervisor's areas of focus and be ready to discuss your contributions. If there are areas you've been trying to improve, cite your progress. Participate in the discussion by asking solid questions, actively listening, responding directly but not defensively — and highlighting the key points you want to make.

Most importantly, you must seek clarification. Hearing that you're 'not doing well enough' isn't

constructive criticism because you can't act on vague generalities. You need to probe for details until you reach an understanding of the priorities and specific actions to take. Know what's expected and agree on a timetable.

Don't stop at your performance. Be sure to weave the topic of your development into the process. Although your development is ultimately your responsibility, your employer benefits as well. Set goals that align with those of your employer or sponsoring organization and with your own priorities for professional enrichment. Point out the value to your employer, and negotiate the resources you need.

By taking more control of the review process, you can both assess your progress and shape your future role.

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## Elaine Ostrander, branch chief, cancer genetics, NHGRI, Bethesda, Maryland



ike most scientists. Elaine Ostrander's work has benefited from collaborations. But somewhat unusually, she estimates that 90% of her publications feature work with scientists who were not based at her principal laboratory. In fact, she didn't even seek out those collaborators who have proved most valuable - they found her.

Ostrander feels that her career path was equally fortuitous. Her early thesis

1993-2004: Clinical Research Division (joined as assistant member, rising to head of genetics programme), Fred

Hutchinson Cancer Research Center, Seattle, Washington **1991–93:** Staff scientist, Lawrence Berkeley National Laboratory, Berkeley, California

**1990–91:** Postdoc University of California, Berkeley **1987–90:** Postdoc, Harvard University, Cambridge, Massachusetts

1987: PhD Oregon Health and Science University, Portland

work and postdoctoral research concentrated on DNA structure. But a cluster of meetings on the genomes of the fruitfly, nematode worm and mouse caught her attention and she decided to change tack. She moved to Lawrence Berkelev National Laboratory in 1991. just as it was beginning to map the dog genome, which offered her the opportunity she was seeking. Her good fortune continued when she met her key collaborators, who helped her forge links between dog and human.

She ran into her first major collaborator, Francis Galibert of the University of Rennes in France, in 1993 after she gave a talk at Cold Spring Harbor Laboratory. A little later, Janet Stanford, Kathleen Malone and Janet Daling from the Public Health Sciences division at the Fred Hutchinson Cancer Research Center in Seattle, Washington, approached her, saying that they had large human genetic sets for breast and

prostate cancer. These allowed the group to look for genetic mutations shared by both species in an effort to pinpoint genes related to disease.

Ostrander's guiding principle behind joining collaborations has remained constant. "Find people who are doing interesting things," she says, "and put your heads together to find ways to do things that are bigger than what you can each do on your own."

The need for bigger challenges is one reason why Ostrander is moving to the US National Human Genome Research Institute (NHGRI) in November. With the dog genome mapped, she is ready to take a wider look at gene function. Access to proteomics tools at the NHGRI's campus in Bethesda, Maryland, will allow her to ask broader questions. And the National Institute of Health's huge number of employees will provide her with plenty more potential collaborators.