

Application finesse equals grant success

Research grant applications are getting more numerous and more complex. So, universities have begun to offer faculty a variety of services to help out, from mentoring programs to grants facilitators. It can make all the difference between funding failure and fruition

by *Rosanna Tamburri*

Like the careers of most young researchers, that of Kathy Gottschall-Pass has been marked by highs and lows. Her two initial applications for research funding were rejected by the Natural Sciences and Engineering Research Council. The experience, she says, was “really discouraging”.

Before applying a third time, Dr. Gottschall-Pass, who is now assistant professor at the University of Prince Edward Island’s department of family and nutritional sciences, asked a senior faculty member to review her application and suggest some changes. “The mentoring process gave me a real person to talk to, someone to bounce ideas off and someone who was able to go through the application with the eye of a reviewer,” she says. Best of all, it helped her get her NSERC application approved.

Universities across Canada are doing more than ever to help faculty apply for and win research grants. UPEI’s mentoring program is one example of the services they are offering. Other universities have appointed grants facilitators who assist researchers through every step of the application process, from formulating a research question to checking the grammar. Schools are also offering grant-writing workshops and providing researchers with seed funding to help

them kickstart research proposals.

Many universities have beefed up research services in recent years, in large part because new funding programs – and their myriad requirements – have made the process so complex, observes Joanne Keselman, vice-president, research, at the University of Manitoba. Ten years ago, Dr. Keselman says, faculty members were applying for operating grants largely from just the three federal granting councils, but now “the landscape has changed considerably”.

For one thing, federal and provincial governments have created new granting agencies, like the Canada Foundation for Innovation, which has a \$3.15 billion budget to fund major research infrastructure programs. In addition, the three federal granting councils – NSERC, the Social Sciences and Humanities Research Council and the Canadian Institutes of Health Research – have added various new programs, most notably the Canada Research Chairs program. “There’s been a huge increase in opportunities. We must take advantage of it,” Dr. Keselman says. “It’s simply something that we can’t afford not to go after.”

Most universities are doing just that. Until five years ago, Queen’s University didn’t have a vice-president of research, notes Sandra Crocker, director of research services. Today, Queen’s spends more than

\$500,000 on research services, equivalent to four full-time grant facilitators. The office of research services also holds seminars on the various research funding programs and workshops on how to complete an application. Some of the university’s departments organize an internal peer review of grant applications.

The university’s participation in competitions has increased in recent years partly as a result of the additional support, Ms. Crocker says. Last year Queen’s submitted 313 applications to the three federal councils, 31 percent more than it did in 1998.

Michael Cunningham, associate professor of chemical engineering at Queen’s, says the school’s research office was instrumental in helping him prepare a grant application. He attended workshops organized by the office, and a facilitator reviewed his application and suggested some changes in the wording. Even seemingly trivial matters, such as ensuring the application was written in the correct font size and had all the necessary signatures, were looked after. “It’s hard to overstate the contribution they make,” Dr. Cunningham says. One of the biggest benefits of the process is that it leaves researchers more time to spend in the lab, he adds.

For young researchers, grants facilitators can play a pivotal role in

launching their research careers. In her first two years at Simon Fraser University, Ljiljana Trajkovic submitted eight research proposals with the help of the university's grants facilitators, seven of which were funded. "This helped make my career here," says Dr. Trajkovic, who is now associate professor at SFU's school of engineering science.

Sara Swenson, senior research grants facilitator at Simon Fraser's Centre for Systems Science, says she and her colleagues "act almost as a peer review for faculty members", reading proposals and pointing out any weak spots in arguments. She also provides them with information on the different funding agencies, suggests other researchers they can contact, and edits the final draft for grammar and spelling mistakes. "There's nothing on a grant application that we

are qualified for the job. "A research officer can look at an application and say, 'You haven't justified that'," Dr. Loewen notes.

Because of the complexity of the CFI program and the importance of the projects, the University of Alberta put in place this year an extensive review process for CFI applications. Each proposal must be reviewed by a senior faculty member, a team of associate deans of research and a facilitator.

Recent changes in research funding began in 1997 with the creation by the federal government of the CFI program. The following year the government restored funding to the federal granting agencies to their 1994-95 levels and in 1999 it created CIHR, announced the Canada Research Chairs program and increased the budget of the Networks of

observes Janice Glasgow, head of computing and information science at Queen's University. Grants facilitators can help put researchers in touch with industry contacts, says Dr. Glasgow, who has served on an NSERC review committee.

Not only is there more collaboration between industry and universities, but also *among* universities, adds Jean Yvon Timothy, director of the industrial liaison and grants office at Université de Montréal. These changes, he says, compound the complexity of the research program as well as the funding application. A research project could involve three researchers from three institutions each with its own intellectual property policy. If an industry partner is involved, that adds another set of rules.

Hard to compete

Canadian universities and researchers have generally welcomed these changes despite the increased difficulties and workload. But some smaller universities argue that these developments have made it even tougher for them to compete for research grants. Robert Perrins, Acadia University's director of research and graduate studies, points out that smaller institutions don't have the money to hire grants facilitators like their larger counterparts. In addition, faculty at smaller universities tend to carry a heavier teaching load, leaving less time to devote to research applications.

Despite this, many schools, including Acadia, have established mentoring programs "simply out of necessity," Dr. Perrins says. The programs pair junior researchers with senior faculty members who review the funding applications. These programs are necessary not only to help researchers obtain grants, but also to attract new faculty members to the university, Dr. Perrins notes.

The programs seem to be having an impact. The Prince Edward Island Health Research Institute has doubled its success rate since it started a mentoring program last year, says Donna Murnaghan, the institute's associate director. She notes that the university had as many as 16 research projects funded this year, up from eight last year and one in 1995.

Among the lucky ones this year was Kathy Gotschall-Pass, who was awarded an NSERC grant for \$43,200 a year for four years to study the role of antioxidants in preventing heart disease. "I was ecstatic," says Dr. Gotschall-Pass when she heard the news. Of the mentoring program, she says, "I can't recommend it enough." **UA•AU**

"There's nothing on a grant application that we won't do."

won't do," Dr. Swenson says. If the request is rejected, she encourages researchers to make changes and resubmit it. "I think our biggest role has been not letting people give up," she adds.

Simon Fraser's five grants facilitators have improved the number and quality of applications submitted by its researchers, says Bruce Clayman, vice-president, research. "I believe it has increased our chances of research funding," he says. Among other things, SFU provides researchers with grants of up to \$5,000 that can be used to cover travel and other expenses incurred in preparing a proposal.

Meeting demands

Even for seasoned researchers, the intricacies of grant requests can be challenging. Peter Loewen, head of microbiology at the University of Manitoba, says of the 30 or 40 pages that make up a typical CFI application, only five are devoted to describing the science. For the rest, applicants are asked to explain what economic and health benefits their project will provide to Canada. If an applicant proposes to hire new researchers to work on the project, the applicant must explain why those particular researchers have been selected and provide evidence they

Centres of Excellence. University income from sponsored research jumped to some \$2.78 billion in 2000, almost double the 1991 level.

"It's been generally recognized that universities are the driving force in stimulating innovation," says Nigel Lloyd, NSERC's director general of research grants. While funding opportunities have increased, so too has the number of researchers competing for funds. NSERC received a record 736 applications for new funding this year, almost double the number it received in 1998, due largely to an influx of new faculty at many universities, says Dr. Lloyd.

At the same time, research costs have spiraled while the ability of universities to fund research internally has been sharply curtailed, adds Barbara Crutchley, senior research development manager at the University of Manitoba. Researchers are therefore more dependent than ever on external grants. "Everything has compounded to increase the competition," she says.

Another important development has been an increased emphasis on industry involvement. Much of the research funds available today are dependent on matched funds from industry or a demonstration of interest by industry in the research results,

Tips for successful grants proposals

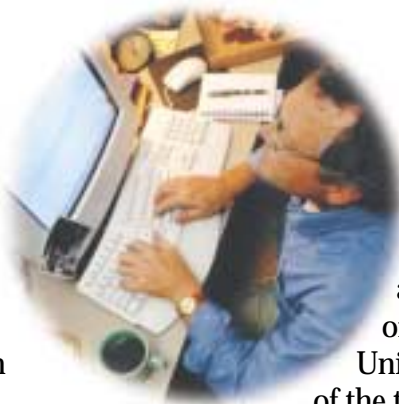
Writing successful research proposals is an art form, research administrators say. Even highly-skilled and knowledgeable researchers can get tripped up by the nuances of proposal writing.

Here the experts offer some of their best advice.



1 Start early, advises Sara Swenson, grants facilitator at Simon Fraser University.

Most applications take weeks, even months to prepare. Not allowing enough preparation time is the most common pitfall researchers encounter.



4 Write clearly and make sure the summary is in layman's terms,

adds Sandra Crocker, director of research services at Queen's University. "It's a critical part of the tri-council review process," she says. "That summary is what everyone on the committee reads in depth."

2 Use all the resources at your disposal.

Get to know your grants facilitator and take advantage of all mentoring programs, workshops and other research services your university offers. If your university doesn't offer such services, seek help elsewhere. Janice Glasgow, head of computing and information science at Queen's University, says she advised a former Queen's student who had moved to a small university where they didn't have a mentoring program.



5 Explain your research goals clearly and don't assume reviewers will understand your intent, says Donna Murnaghan, associate director of the Prince Edward Island Health Research Institute.



6 Don't get discouraged. Many applications get turned down on the first try and, with a little work, are subsequently approved, adds SFU's Dr. Swenson.



3 Read your colleagues' funding proposals and have as many of them as possible read yours. "That's what I do myself," Dr. Glasgow says.

