

A winning proposal

Young, aspiring researchers often have to learn the hard way when it comes to writing a killer grant application. But a range of European initiatives aims to give them a helping hand. Karen Kreeger reports.

Jonas Ludvigsson wrote nine applications before finally getting a grant to finance his first laboratory study. “That was a tough time,” recalls the paediatrics postdoc at Örebro University Hospital in Sweden.

Most students and postdocs, like Ludvigsson, learn grantsmanship through trial and error. But learning the ropes alone is hardly a recipe for instant success. And until relatively recently, there weren't many solutions available to European students beyond hoping that their principal investigator would offer some useful advice — making the choice of mentor a critical one (see *Nature* **422**, 784–785; 2003).

This situation is beginning to change. University-based workshops are emerging, as is better training through foundations such as the Wellcome Trust, and clearer instruction from funding bodies like the European Commission.

LEARN FROM EXPERIENCE

Ludvigsson's eight attempts before his ultimate success were not entirely in vain. He turned the material he gathered from a variety of sources (see Web links, opposite) into a career-development course, which he taught for the first time this year.

Katja Hagström, a doctoral student in occupational medicine also at Örebro University Hospital, says that the course taught her to keep her proposal straightforward and easy to read. And, perhaps most importantly, Hagström learned to emphasize in the application why her research is significant.

Walter Osika, a doctoral student in cardiovascular research at Örebro University Hospital who also took Ludvigsson's course, says that novice grant-writers should read the instructions closely and not leave their proposal until the last minute. He also recommends that students show early drafts not just to their supervisor but also to friends or family — after all, if non-researchers cannot understand the basic ideas, the proposal is probably unclear and overly technical.

Hans-Olov Adami, from the department of medical epidemiology and biostatistics



Hans-Olov Adami feels that grant-writing is a neglected area in European institutions.

at the Karolinska Institute in Stockholm, Sweden, says that classes in grant-writing are a neglected area in European institutions. “To compensate for that, we have a long tradition in our department to organize courses in grant-writing for our senior graduate students,” he says. These semester-long courses routinely end with participants submitting a research grant proposal, usually to a Swedish funding source.

TIPS FROM THE TOP

Some charities, funding agencies and private consultancies also impart grant-writing advice to aspiring researchers. Mary Phillips, scientific programme manager at Britain's Wellcome Trust, the world's largest biomedical charity, says that the trust largely gives grant-writing advice on a case-by-case basis, usually to researchers who are unfamiliar with its application procedure. She has written a short article that is sent out with application forms and distributed at meetings. It covers ‘signposts’ for writing a competitive application (see ‘Wellcome signposts’, left).

The European Commission's Sixth Framework Programme devotes €1.6 billion (US\$1.9 billion) — almost one-tenth of its budget — to promoting training, mobility and career development for researchers through its Marie Curie Actions (see *Nature* **423**, 98–99; 2003). Estelle Kane, the commission's UK contact for human resources and mobility, regularly holds information days on applying for the fellowships. Those sessions emphasize understanding the evaluation process and the importance of meeting the scheme's deadlines.

Malene Cortelius, a consultant for the Sixth Framework Programme based at the EuroCenter, part of the Danish Technological Institute in Taastrup, has teamed up with Hyperion, a consulting firm run

Wellcome signposts

Mary Phillips, scientific programme manager at UK biomedical charity the Wellcome Trust, has written a short article for the benefit of those who are applying for the first time for one of the trust's grants. But the basic advice that she sets out in the article, “Grantmanship: signposts for competitive grant applications”, could act as a checklist for any grant hopeful. Here are a few of the questions that grant-writers should ask themselves before they submit an application:

- Is the work novel, exciting and necessary?
- Are you repeating experiments that have already been undertaken?
- Have you justified various aspects of the funding requested?
- Have you filled out the ‘housekeeping’ portions of the form correctly?
- Have you checked your form for spelling and grammatical mistakes? **K.K.**

▶ www.wellcome.ac.uk



Teachers: Shaun McCarthy (above) and Malene Cortelius have teamed up to coach European researchers in maximizing their chances of securing a grant.



by Shaun McCarthy, an Irish engineer who has been the recipient of more than 150 European grant proposals, to teach grant-writing skills for European project-management courses and Framework grants. The course provides guidelines for dealing with the complexity of the multi-country, multi-discipline proposals, focusing particularly on how to provide details of collaborators and budgets.

Lizzie Melby Jespersen, international projects manager at the Danish Institute of Agricultural Sciences (DIAS) in Tjele, has attended several of Hyperion's courses and has enlisted McCarthy to teach in-house courses at the institute on grant-writing and contract negotiation for postdoctoral fellows, advanced researchers, research administrators and heads of research departments. Jespersen says that such formal training is effective. Since working with Hyperion, DIAS's success rate in obtaining grants from the European Commission has risen considerably.

Sieglinde Gruber, who works for the European Commission's Strategy and Policy Aspects Unit in Brussels, notes that the Marie Curie Actions do not specifically provide grant-writing advice to postdocs and advanced students. But she agrees that such skills are part of the broader delivery of training through research, which is the main objective of some of the Marie Curie Actions.

MAXIMUM MENTORING

Formal grant-writing training is "an interesting topic", says Luc Van Dyck, executive coordinator of the European Life Sciences Forum in Heidelberg, Germany. "But I think it still remains mostly a business between supervisors and trainees," he argues.

The problem is that many senior researchers don't involve their junior colleagues in grant-writing early

enough in their careers, says Olof Akre, a researcher in the Karolinska Institute's clinical epidemiology unit. If informal approaches fail, more formal methods become necessary, he believes.

That's why Akre, along with his colleague Adami and Anders Ekbom, a professor in the department of medicine at Karolinska Hospital, have come together to teach a grant-writing course — as well as encouraging their own students to apply for grants early and often. The course requires students to complete at least one grant application.

Ekbom stresses the importance of good writing in producing a winning grant proposal. "A well-written application is more likely to be funded than a badly written one," he says. "It may sound simplistic, but it is a hard message to convey."

To make this message stick, the trio ends the course by having the students form review boards to judge the quality of each others' applications, and rank them in order of strength, just as a real granting body would. "This is a painful process, but grantsmanship has to be learned — no one is born a grant-writer," Ekbom says.

Gunnar Larfors, one of Ekbom's graduate students, has written successful grants with his mentor. But the formal course demystified the process and made him more confident about going it alone. "Being able to raise your own money is a crucial step in the path to independence as a scientist," Larfors says.

Whatever the method of education — learning from a mentor, taking a formal course or educating yourself through materials supplied by funding agencies — the key is to take the first step early, and not wait until the end of your doctoral or postdoctoral work to learn the ropes of securing funding. A little education and preparation will take some of the error out of this 'trial-and-error' process.

Karen Kreeger is a freelance writer based in Media, Pennsylvania.

Web links

How to write a grant application (US National Institute of Allergy and Infectious Diseases)

♦ www.niaid.nih.gov/ncn/grants/write/write.pdf
Grantslam

♦ www.cayuse.com/productinfo.htm

Marie Curie Actions

♦ europa.eu.int/mariecurie-actions

EU Mobility Portal

♦ www.ukro.ac.uk/public/Mobility/Events/ncpeventautumn.htm

Sixth Framework

♦ fp6.cordis.lu/fp6/home.cfm

Hyperion Training Courses for Research Managers

♦ www.hyperion.ie