

No place like home

Young eastern European scientists are returning to their home countries to set up labs — with mixed success. **Claire Ainsworth** tracks their progress.



For Czech researcher Martin Anger, spring 2008 was a turning point. The 38-year-old cell biologist was just finishing a postdoc at the University of Oxford, UK, and was mulling over where he might set up his own lab. With two prestigious postdocs under his belt, he had to choose whether to apply to well-funded, well-known institutions in the United States and western Europe, or head home to the Czech Republic, and contend with low salaries, a developing research infrastructure and bitter political wrangling over science funding. He chose home.

"I believe people should go back and benefit their country," he says. "Also, the conditions for returning were good." Despite the drawbacks, Anger found decent funding and openings for young researchers.

Anger is not unlike many young researchers from the former Eastern bloc nations. Born in the late 1960s and 1970s, they witnessed the

fall of the Berlin Wall in 1989 (see page 586) and headed overseas as PhDs or postdocs to expand their horizons and learn new research skills. Offered the option of remaining abroad, many are nevertheless returning home. Thanks to better funding in some cases from their home countries, and money from foreign grant funders, returning is now easier than a decade ago. But it's still not easy. Some have trouble garnering sufficient funding, or are battling old academic hierarchies that are bitterly opposed to change.

So what's the attraction? Many, like Anger, want to be part of their country's scientific development. Others also cite personal, family or cultural reasons for going back. "I never wanted to be an immigrant in another country," says Agnieszka Dobrzyn, a molecular biologist at

the Nencki Institute of Experimental Biology in Warsaw. "Going abroad was always going to be a temporary measure."

In some cases, the past five to ten years have brought funding improvements. Individual governments have recognized the importance of enticing young scientists

back to their native countries, and are tempting them with start-up money. In many cases, the funds come from deep-pocketed international sources such as the European Union, the Wellcome Trust, and the Howard Hughes Medical Institute, and

play a significant part in making these homecomings a viable option.

The European Molecular Biology Organization (EMBO), for example, offers three-year Installation Grants; the Wellcome Trust has International Senior Research

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Fellowships, which last five years and can be renewed. Anger received an installation grant together with a fellowship from the Academy of Sciences of the Czech Republic and a Marie Curie Reintegration Grant from the European Commission. Additional money from the academy has allowed him to buy the state-of-the-art live-cell imaging equipment needed for his lab at the Institute of Animal Physiology and Genetics in Liběchov.

His colleague Petr Svoboda, another EMBO and academy grant recipient, established his lab at the Institute of Molecular Genetics in Prague in 2007. Svoboda says the facilities and equipment there are world-class. "The infrastructure here is the same you would get in Germany or the United States," he says. "The physical environment we work in is exactly the same." The same is true of other former Eastern bloc nations, some researchers say. The past decade has brought significant improvement. "We have much better facilities and better access to equipment," says Arnold Kristjuhan, a lab head studying chromatin modifications at the University of Tartu in Estonia. "We have better international connections."

Juggling act

The situation isn't perfect, however. Researchers often have to manage several grants at once to stay afloat and to employ personnel. In the Czech Republic, for example, standard postdoc salaries are not very attractive. "If you want to have a postdoc, you have to assemble a salary from several different sources," says Svoboda.

Postdoc salaries amount to as little as a quarter or a sixth of those in the West, which makes it hard for new lab heads building their teams to attract foreign candidates. And although foreign grants can supply more generous salaries, this can put a postdoc in the uncomfortable position of earning substantially more than an institutional professor, says László Acsády, a Wellcome Trust fellow at the Institute of Experimental Medicine in Budapest. Although this is acceptable for a foreigner, says Acsády, realpolitik would preclude the presentation of such an offer to a Hungarian researcher. "Most of the time, if you can't get a Western European, you hire two eastern Europeans," he quips.

But money isn't the only problem. Many eastern European countries are still slowly restructuring their old-fashioned academic set-ups, in which senior professors would preside over huge labs of junior scientists and monopolize research funds. "The problem is the hierarchical academic system," says Gerlind Wallon, deputy director of EMBO and a manager for the Young Investigator Programme. "It's something they have to get rid of." The idea of a thirty-something researcher setting up shop independently is still alien to many of the old guard. "It's

unbelievable sometimes — these professors are treated like gods," says Maciej Żylicz, president of the Foundation for Polish Science in Warsaw and head of the department of molecular biology at the International Institute of Molecular and Cell Biology (IIMCB) in Warsaw. Young, dynamic group leaders returning from abroad with large grants can infuriate incumbents, especially when the younger scientists start turning out more papers than their superiors, who are not used to being judged on their output.

Such mindsets, and some institutes' funding schemes, mean that young researchers sometimes struggle to establish an independent lab. The Western-style career path — starting with the PhD, followed by a postdoc or two, followed by a position as head of an independent lab — has been slow to catch on in some countries. "This scheme is absolutely lacking in Hungary," says Acsády. "It needs to be established."

Like many, Dobrzyn, had trouble finding an independent position when she returned home. Luckily for her, two forward-thinking institutions, the Nencki and the IIMCB, decided to run annual competitions for young group-leader positions. Dobrzyn won hers at the Nencki in 2007. Funding bodies such as EMBO and the Wellcome Trust are also pushing for change, insisting that institute heads guarantee the independent status of researchers before grants are awarded.

Once a researcher's lab is set up, problems accessing funding mean it can still be difficult to remain competitive at an international level. And that's not just because grants are scarce. Many eastern European institutions are still fumbling to grasp how international grants work and how to write effective applications. The Nencki has a team that hunts for funding opportunities and helps with applications. "It's a great help for us," says Dobrzyn.

Returning scientists typically face problems and political situations unique to their countries. The Czech government, for example, has dismayed basic researchers by announcing plans to cut the funding for the Czech science academy in order to fund more applied research. It is also attempting to impose a metric for measuring research that is linked to total output, rather than to the quality of original papers — a move that Czech scientists, including new lab heads, are trying to fight (see *Nature* 460, 157; 2009). "There is a lack of a coherent research policy," complains Svoboda. "There is no strategy at the governmental level."

In Estonia, the problem isn't support for basic science, says Kristjuhan. It's the small

size of the scientific community, which makes it harder to secure collegial advice on an experiment or draft manuscript. "Everyone is studying their own topic; it's hard to find [fellow] experts in the same institute or even within the country," Kristjuhan says.

Political drive

The desire for change has prompted young lab heads to mobilize and lobby politicians

and government officials. Acsády, for example, belongs to an e-mail list of Hungarian group leaders who write letters and send petitions to government officials asking for change. And they have achieved results: he and his colleagues recently persuaded the government to earmark funding for Hungarian researchers who were unsuccessful in their bids for European Young Investigators Awards. Those who were awards finalists can now compete for the Hungarian government money.

National academies of sciences, international

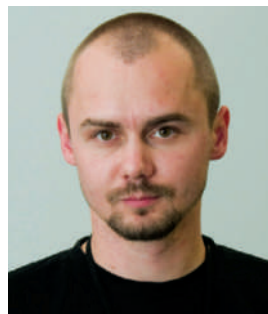
fundors and politicians are also pushing for change. The Polish Foundation for Science, for example, has created three grant schemes to attract researchers at different stages of their career. It is also asking the Polish government to shift science funding more towards competitive grants, rather than lump-sum allocations to institutions. Stung by Poland's failure to win funding from the European Research Council last year (see *Nature* 453, 558–559; 2008), politicians are listening. A new research council for basic science, which will manage grant money, is in the works, as is a scheme to encourage older professors to take early retirement. "We hope this will crash the hierarchy," says Żylicz.

Countering some of these predicaments is the apparent quality of these labs' science. The Wellcome Trust, which started offering fellowships to eastern European countries in 2002, reviewed the scheme in 2007. It was sufficiently impressed with the research results to change its policy and allow existing fellows to apply for grant renewal. "Many of these labs are at the cutting edge internationally," says Candace Hassall, head of basic careers at the Wellcome Trust.

Despite those ongoing thorny problems, many researchers remain sanguine. "This separation for 40 years cannot be undone in 20 years," says Anger. "It is still not easy, but it does change," says Dobrzyn. "It's worth it to come back."

Claire Ainsworth is a freelance writer based in Southampton, UK.

For more on eastern Europe, see <http://tinyurl.com/eeurope>.



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— Petr Svoboda