

ACADEMIA Funding for Science

MAGIC PLUS MARKETING

The Polish Academy of Sciences' newly-created Bureau for Scientific Excellence will be focusing on helping researchers file ERC grant applications. The Academy has a big role to play here, because we pursue fundamental research and have certain advantages that other institutions do not – says **Prof. Paweł Rowiński**, Vice-President of the Polish Academy of Sciences.

ACADEMIA: In several issues of our quarterly magazine, we have showcased Polish researchers who have won grants from the European Research Council. All of them stressed that they were among a select few. Why are ERC grants so important, what is magical about them?

PAWEŁ ROWIŃSKI: Firstly, they are very prestigious. Secondly, the number of such grants is a reflection of the caliber of science in a given country: how well a country fares in winning such funding is always an important ranking factor. Poland fares terribly in this respect. At this point we have 21 ERC grants, whereas the French for instance have more than 700, the British over 1200. This would not worry us so much if, for instance, the Hungarians did not have significantly more such projects, with 48. These grants are also so important because they involve fundamental research, “Science” with a capital “S,” so to speak. We have a lot of talented people with extraordinary ideas, but a serious problem with securing ERC projects.

Do many researchers from Poland apply for the grants?

Yes, but their applications do not score many points. There are also too few such applications. Another problem is the uncontrolled distribution of the applications. Everyone has a right to submit a project, of course, but some of them are truly badly prepared, or come from institutions of weak standing, which is also important. Although these are grants awarded to individual scientists, the caliber of the institutions they represent is also taken into account. Frequently the authorities of an institute or university do not even know what kind of level is required to win an ERC grant. As a result, Poland has quite a poor success rate. Of course, some good projects are also submitted, but frequently the researchers are unable to cope well in the final stage. In the case of young scientists applying for Starting Grants, this involves an interview. Preparing for it is a whole learning process. We know from



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POLISH-WON GRANTS FROM THE EUROPEAN RESEARCH COUNCIL

our French colleagues that they have a whole staff of people working on each “contender.” Things are somewhat like for Olympic athletes: given two excellent scientists, it is the better-prepared one who will win out.

The Polish Academy of Sciences has a concept for how to help.

This is the objective of the newly-created Bureau for Scientific Excellence, Polish Academy of Sciences. We want to promote scientific excellence in the broad sense, but at this point we will be focusing on assisting with ERC grant applications. The Academy has a big role to play here, because we pursue fundamental research and have certain advantages that other research institutions do not. We have PAS institutes and units throughout the country as well as links to all the other research institutions in Poland, through the body of elected members of the Academy and through the PAS committees. We also have our own scientific centers abroad, including in Paris, Berlin, Vienna, Rome, and Brussels. We have come to the conclusion that they should be put to use here: we can train our own ERC candidates there, and we can forge good contacts there with French, German, Austrian partners, who fare best in such competitions.

Will the Bureau only be assisting scholars employed at PAS institutes?

No, it has been created to support the whole scientific community. Of course, we will not be able to support every scientist, but by carefully screening the potential candidates, we will be able to support those researchers who do stand a chance of ultimate success.

Will the staff of the Bureau actively look for individuals who might apply, but for some reason for not thinking about doing so, or will you be waiting for scientists to apply themselves?

Yes, the Bureau will actively look for talent, not just wait for scholars to come forward and seek assistance of their own accord. In the case of young scientists, we might talk with various thesis advisors and institute directors about up-and-coming scholars who have potential, but who might not yet realize it or might not yet be bold enough. Indeed, there is a certain Polish proclivity for thinking that we are not good enough to vie in such prestigious competitions, that we may as well just apply for Polish government grants instead. Our Bureau is also planning many training sessions, teaching not what an ERC grant is, because that is available online, but the secrets of writing good applications. We have been learning from our French colleagues, for instance, who at our invitation came to Warsaw to give lectures in April.

In other words, the Bureau’s job is about finding diamonds in the rough, and helping write applications.

Yes. Especially since the applications seem to be quite simple in form. But that is misleading, because one has

to write a short document that nevertheless somehow stands out. We know that out of 100 applications, 10 stand a chance. Many researchers may have excellent ideas, but an idea alone is not enough. It needs to be written up in a way that will persuade the evaluation panel, which does not generally consist of specialists in the narrow field. An application needs to be written to convince the evaluators that the idea is excellent and has virtually Nobel-winning potential. At a meeting in France, our colleagues made us realize that the greatest skill lies in writing a good abstract, one that will captivate the panel. That is every hard and scientists frequently do not realize that. They write up a hermetic abstract, convinced that it contains everything necessary, unaware that it might simply fail to grab the panel’s attention. And so, we want such abstracts to be read in advance by people who have worked on ERC panels or have received such grants themselves. The applicant scientists should also be sent to France or Germany for trial interviews.

In other words, projects need to be accompanied by the right marketing, something generally thought to be associated with the business world. But ERC grants are also a kind of business. There is big money at stake.

The money is indeed significant. A scientist who applies for a Starting Grant stands a chance of winning up to 1.5 million euro. In the case of Advanced Grants, awarded to seasoned researchers for a period of five years, the funding may even be as high as 2.5 million euro. On the other hand, it turns out that this funding is not all that great when compared to other opportunities in Poland. We have structural grants that can be won more easily, and sometimes even involve more money. That is another reason why some people opt out of applying to the ERC. But prestige is also important. Winning an ERC grant puts not only the winner, but also the institution they represent on a different level. It’s a kind of quality stamp. Let me also point out that ERC grants do not have to be carried out by Poles; they can also be done by foreigners who want to carry out a project in Poland. Hungary, for instance, attracted eight or ten grants from abroad.

What does that mean for them?

When an Austrian scientist, for instance, carries out a grant project at a Hungarian institution, that counts as a success for Hungary, because the grant is listed in its statistics.

Prof. Leszek Kaczmarek, a member of the ERC Starting Grants Neuroscience Panel in 2007–2012, told us that having a previous publication in a prestigious journal was a decisive factor for winning a grant.

There are three types of grants. There are different requirements for researchers at the outset of their scientific careers, than for seasoned scholars seeking an Advanced Grant. They have to be well-recognized and of course it is good for them to have publications in *Science* or *Nature*.

Prof. Paweł Rowiński

is Vice President of the Polish Academy of Sciences and a Professor at the PAS Institute of Geophysics, for many years its director. He is a member of the Scientific Councils of five research institutions, and is Vice Chair of the Europe Division Executive Committee of the International Association for Hydro-Environment Engineering and Research (IAHR).

But first of all, this is not crucial in every field – computer scientists, for instance, have a different criterion of excellence. And secondly, looking at someone’s publications does give us some indication of their potential, but I would not expect young people to have a large number of articles in such journals. They should definitely have published some things that evidence their autonomy as a researcher. That is something that ERC panels attach a lot of importance to: that an applicant’s publications should not be written in tandem with their own thesis advisor. And that runs somewhat counter to the Polish tradition. In our country, a senior promoter is typically behind the work of young scientists, and that unfortunately disqualifies the person from later applying for a grant.

Polish ERC grant-winners:

Mikołaj Bojańczyk
University of Warsaw

Janusz M. Bujnicki
International Institute of
Molecular and Cell Biology

Marek Cygan
University of Warsaw

Tomasz Dietl
PAS Institute of Physics

Andrzej Dziembowski
PAS Institute of Biochemistry
and Biophysics

Stefan Dziembowski
University of Warsaw

Piotr Garstecki
PAS Institute of Physical
Chemistry

Ryszard Horodecki
University of Gdańsk

Maciej Konacki
Copernicus Astronomical
Center

Natalia Letki
University of Warsaw

Katarzyna Marciniak
University of Warsaw

Piotr Nowak
PAS Institute of Mathematics

Marcin Nowotny
International Institute of
Molecular and Cell Biology

Justyna Olko
University of Warsaw

Grzegorz Pietrzyński
Copernicus Astronomical
Center

Andrzej Udalski
University of Warsaw

Piotr Sankowski
University of Warsaw

Piotr Sułkowski
University of Warsaw

So more autonomy, less feudalism?

This is an excellent gauge of how well we are combating our sometimes old-fashioned traditions, moving towards the trends that are prevalent in Europe. Whether we like it or not, we have to strive to face this challenge, otherwise our now shameful standing will not improve in any significant way.

One Pole who has served on an ERC panel in the pure sciences told me that there was a strong representation of Hungarians on his panel. Might we be able to increase our involvement in the application-evaluating panels?

That is another objective of our Bureau. We need to encourage our scientists to serve on such panels. The ERC Research Council is also important. We once had Prof. Michał Kleiber, and later Prof. Tomasz Dietl serving on it. Right now, however, there is no Polish representative. And that is important, because these people determine the institution’s policies.

So we need to strengthen our institutional presence?

Yes, although as things now stand we have more panelists than grant-winners. They themselves often tell me that the Polish applications are weak, that they are not up to the caliber of the others. That is why it is important for the institute directors or university rectors to know that these are prestigious grants, that only truly good applications should be approved. I also have to say that the awareness of the existence of ERC grants among the people who manage science in Poland is not very great. Very often people on a quite high administrative level even ask: what is the ERC, anyway?

In other words, it is important to develop a brand awareness, as a marketing specialist might say.

Yes. It is hard to imagine a young scientist being aware, if his director has no idea that this is something worth fighting for. If an institution has two grants, that means a lot. It turns out that 50% of all ERC grants are won by the 50 top European institutions, that the best science cumulates there.

There are models to emulate there.

Of course. Although we cannot expect to enjoy the kind of success as France or the United Kingdom, for instance, because of the money allocated to science. The number of ERC grants correlates with publications in *Nature* and *Science*, and the number of publications correlates with the funding allocated for research. And here we rank sadly low.

We have a lot of catching up to do, in the humanities as well.

In some fields, we may not have the necessary infrastructure and so it is hard to compete. But as far as the humanities are concerned, there is no reason why we should not be beating out others. For example, in studying the transformation of Eastern Europe, a topic Hungarian researchers have won grants for. There is no reason why we should not be just as good in this field. Many grants have been won by Hungarian mathematicians, but we also have an excellent tradition and our mathematicians are of great standing, though we could have better results here. There are a lot of fields of research and we cannot say: this field yes, that one no. Talented people are everywhere. But often there is a conviction among Polish scholars in the humanities that our problems are local and do not interest anyone. But they are not more local problems than, for instance, the history and culture of Native Americans, for which a Polish scholar won a grant.

We also have good, well-respected research centers.

Yes, although that does not necessarily mean anything. The University of Warsaw wins grants, whereas the equally high-ranked Jagiellonian University does not. Recently we have witnessed the potential of the smaller University of Zielona Góra, for instance, whose scientists were involved in the discovery of gravitational waves. I am encouraging members of the POLGRAU group to give the ERC competition a shot. They are at a great point, with a demonstrated concept; this is pure science. They are excellent scientists, they publish in good journals, but they seem to approach the idea timidly.

We need to overcome the sense that we are not as good as others?

The French are not somehow cut of better cloth than us. They have simply been taught that they have to be consistent and determined. We met with a researcher in France who had secured an ERC grant the third time around. Poles often say, after a first unsuccessful attempt: that’s it, we’re not going to apply again. We have to learn to ignore the whisperings of our own wounded ambitions. And learn to fight.

INTERVIEW BY ANNA ZAWADZKA