

# Editor's LETTER

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## Land of Opportunity

Since World War II many emerging areas of science, including chemical biology, have been shaped in the U.S. This success was to no small degree fueled by the influx of immigrant scientists that were given an opportunity to succeed in the U.S. academic system that is, for the most part, a meritocracy. Young researchers from around the globe received excellent training and a chance to establish their own research programs before turning 30. Of course, this system came not just with opportunity but also with great risks. No permanent position was promised, and tenure rates decreased at the most prestigious institutions. This system attracted self-confident risk-takers that believed in their chance to achieve even without the promise of a secure position. It is difficult for someone like me who benefited greatly from this system to argue with the results produced.

During this same period, hierarchical structures dominated the European academic system as professors and research directors wielded almost absolute power. The coveted positions at the top of the pyramid were earned by researchers often in their 40s. However, in the early 20th century when European science led the way, the age structure in Europe was quite different, a fact that is sometimes forgotten. Young scientists in the areas of chemistry and biology had the opportunity to rise to the level of professor even before the age of 30. However, with time the situation changed—at least in many places.

Recently, something quite remarkable has happened in parts of Europe; realizing that scientific talent will go wherever the best opportunities exist, governments have introduced programs aimed at young scientists just starting their own research programs. Most visible is the Young Researchers Program of the European Research Council (ERC) that has run several competitions for grants of roughly 1.5 million Euros each over five years. Successful applicants can establish their program at the institution of their choice without much concern over fundraising. Perhaps less visible, some individual governments in Europe have put their own programs in place. Germany has several funding mechanisms in place for young researchers that have different names—the Emmy-Noether Program by the German Research Council (DFG) and the Ministry for Education and Science (BMBF)—but provide similar awards: typically, five years of funding for the group leader as well as a group of three to five co-workers and some additional money for equipment and supplies. Support of 1.5 million Euros or more is not uncommon.

Applications from foreigners (and particularly non-Europeans) for these programs are surprisingly rare. I am often surprised when talking to young faculty or senior postdocs in the U.S. about these opportunities; many of them simply are not aware of the programs. Language is another concern as many English-speaking researchers throughout the world may not be conversant in German. However, language is no longer an issue at top institutions with English now entrenched as the working language in science. For life outside the laboratory this may be less true, but large international cities can be very accommodating to foreigners. Another common concern is with one's career progression following the initial grant. Since these grants are not connected to tenure-track positions, they often serve merely as launching pads for a career at another institution. For those performing their work at an excellent institution, having access to superb co-workers and facilities can make all the difference in getting one's career off the ground. With a good track record, obtaining a desirable and permanent professorship is typically much easier.

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It can be argued that having foreigners assume positions that have been endowed with enormous domestic resources increases the risk of losing those people to institutions abroad and thus “wasting taxpayer money”. Considering the history of the Laboratory for Organic Chemistry at the Swiss Federal Institute of Technology (ETH) Zurich, this seems to be a short-term concern. In the long term the institutions and countries will benefit. ETH hired many young chemists in the early 20th century, including Staudinger (ETH 1912–1926, Nobel Prize 1953) and Kuhn (ETH 1926–1929, Nobel Prize 1938). They eventually moved on, but following these departures, superb foreign chemists hired early in their careers remained at ETH, starting with Ruzicka (ETH 1929–1957, Nobel Prize 1939) and Vladimir Prelog (ETH 1957–1977, Nobel Prize 1975). These examples show that excellent conditions to do research coupled with good funding and opportunities for young scientists will attract the brightest minds from anywhere. While some may be lured away to seek opportunities elsewhere, others will undoubtedly stay.

It may be time for young chemical biologists around the world to appreciate the opportunities that exist in Europe. The chance to quickly establish a high profile career by benefiting from well equipped institutions and generous packages to do great research should not be undervalued. After a good start (not marred by funding woes) many options should become available—and not just in Europe.

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