Unification for European Immunology?

There is much work ahead if Europe is to maintain its prominence on the world's immunological stage. This is important to maintain the long pedigree of immunology research on the European continent and to balance scientific endeavors in other parts of the globe, in particular the United States. Many immunologists in Europe are starting to feel at a disadvantage with regard to the United States. Most important, research funding remains less generous in Europe and, with the migration of several leading European figures in immunology to the United States and the closure of the Basel Institute for Immunology (seen by some as symbolic of the change in attitude toward basic immunology research), there has been an air of disquiet within the European immunology community. How much is European immunology losing ground? Not so much that we will be unable to catch up, as long as the European community urgently addresses some major problems.

The first issue has to do with funding, as has been highlighted before. The countries in the European Union currently invest a smaller percentage of their gross domestic product in R&D than do the United States and Japan, and if funding for academic research does not increase rapidly, both for salaries and research resources, serious problems could soon arise. Although the biotech sector creates money and jobs, in spite of recent progress made in several European countries this sector is also much better developed in the United States.

The second issue deals with organization. This obstacle may be even more serious than the issue of funding, as discussed in a recent editorial by R. van Duinen.* Two major points must be addressed. First, political change in Europe moves slowly; bodies capable of providing resources for science remain thinly spread or poorly utilized. This needs to change. Second, European administrative bodies need to do a better job of demonstrating that they are capable of efficiently promoting the development of biological sciences.

Scientists, rather than bureaucrats, must lead the way.

There is no question that the sequencing of the yeast genome by a European consortium was a success. Yet this cannot mask the fact that a major weakness has emerged in genomics, for which most resources (with a few notable exceptions, such as the Wellcome Trust–funded Sanger Centre in the United Kingdom) are located in the United States. This illustrates how Europe has been less able to orchestrate the areas of biology where massive investments are needed. How were the required resources mustered for other ambitious projects (the European Molecular Biology Organization and, in physics, CERN being bright examples)? It is ironic that the road to human genome analysis paved by the Centre d'Etude du Polymorphisme Humain in France was followed more rigorously in the United States than in France and Europe. In areas of less intensive biological research, including immunology, Europe is not doing much better. Europe currently operates on a "clustered" system, in which consortiums of research groups work to attract funding. Until now, the European community has seemed unwilling to support an agency that could distribute funds to individual research groups on the basis of scientific quality, as National Institutes of Health review committees do in the United States. One reason is that countries that are less advanced scientifically are afraid of losing their share of funding. The current clustering system has its merits, but runs the risk of excluding younger groups. This system should complement and not replace quality-based funding.

Are there any reasons, then, to be optimistic about European immunology? Certainly; the productivity of European immunologists is still high, as reflected this month at the International Congress of Immunology in Stockholm, Sweden. The Basel Institute may have closed its doors, but many of its scientists have remained in Europe, and several institutes for immunology across the continent have been set up or revamped. Thus, there remain very strong immunology departments and groups spread across Europe, and there is still opportunity for European students and postdocs to receive excellent training.

Many scientists in Europe, including immunologists, are waiting for progress in organization and funding in European research, and many believe that science could play a role in guiding Europe toward long-awaited improved integration. But this implies that scientists, rather than bureaucrats, must lead the way. Is this an unrealistic dream?

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