

MOVERS

**Nancy Andrews, vice-chancellor and dean,
Duke University School of Medicine,
Durham, North Carolina**



2003-07: Professor of paediatrics, Harvard Medical School, Boston, Massachusetts

2003-07: Associate dean then dean, basic sciences and graduate studies, Harvard Medical School

1999-2003: director, Harvard-MIT MD-PhD programme, Harvard Medical School

As the new dean of a top US medical school, Nancy Andrews holds a position only a handful of women have achieved. While getting her first degree in molecular biophysics and biochemistry at Yale University, Andrews knew she wanted a research career, but she didn't contemplate medical school until she saw the opportunity to work at the interface of medicine and science. She completed her PhD in biology at the Massachusetts Institute of Technology (MIT) in Cambridge and her MD at Harvard. She chose paediatrics for her residency training in part because she enjoyed genetics, the basis of many childhood diseases.

Her path shifted towards administration once she became a faculty member at Harvard Medical School, as she hoped to help improve the Harvard-MIT MD-PhD programme. "It wasn't optimal for students," she says. The programme needed better integration between departments to speed up the time to graduation. Her former mentor at MIT, David Nathan, says that as soon as Andrews took over, the programme flourished — in part because she got to know each student individually. "She got in the trenches with the troops," he says.

Appointed dean for basic sciences and graduate studies at Harvard, Andrews relished problem-solving and helping to develop young careers. All the while, she has overseen a productive lab, working on the regulation of iron homeostasis and its relevance to disorders such as anaemia and haemochromatosis.

Over the past few years, she has been approached to take on a number of senior administration jobs, but none suited her until the offer came from Duke. "I was impressed by the culture and how easily innovation comes there," she says. What she didn't anticipate was the hoopla made of her appointment. "I was surprised, but ultimately glad the fuss was made to remind people that gender equality is still a problem," she says.

Nathan likens Andrews' personal style to that of Eugene Stead, an innovative former chief of medicine who made Duke's medical school a top programme in the 1960s, in part by tending to the needs of younger faculty members. Although Andrews will undoubtedly face the problems of every major medical school — recruitment and retention of top faculty members, attracting the best students and devising novel ways to teach — Nathan expects she will maintain the standard of excellence that was fostered by Stead. ■

Virginia Gewin

NETWORKS & SUPPORT

Hopes for growth in Spain

Despite the occasional high-profile success, Spain has not really reached its potential in terms of scientific output. Is the problem cultural or it is directly related to limited resources? Perhaps it's a bit of both.

Spain has more than 150,000 scientific researchers, according to statistics collected by Eurostat (<http://epp.eurostat.ec.europa.eu>) — but leading European research countries such as France and Britain have twice that number, and the United States has ten times as many. The gross domestic expenditure per researcher is half of that in France or Britain, and one-third of that in the United States. But this alone doesn't explain why Spain publishes so few papers in *Science* or *Nature*: 5 to 10 times fewer than France or Britain and 50 times fewer than the United States. It even publishes fewer than smaller countries such as the Netherlands or Switzerland.

One problem is that funding in Spain rarely provides for students or postdocs. The national funding agency, the CICYT, relies mostly on permanent staff to carry out the benchwork and each scientist is allowed to be full-time on only one project at a time. Competitive research requires substantially more resources. Regional funding may add

a small yearly amount to the CICYT budget: European Union money could make a difference, but it reaches only a few exceptional projects and groups.

Spain should invest generous funding in a few outstanding institutes. It currently has some 'centres of excellence' — research facilities selected by the government. Unfortunately, these compete with other institutions for funding and have only limited additional resources to service and renew equipment and assist visiting scientists. They do not have privileged funding for students or technical personnel. Change does not look likely.

Even if Spain does invest in these centres, it must also address the problems documented in a recent study (A. Sibert *Labour productivity growth in the European Union* www.europarl.europa.eu/compar/econ/emu/20061220/sibert_en.pdf): low productivity and weak collaboration among Spanish research groups. The country's scientists will have to earn the trust of tax-payers, funding agencies and potentially collaborative companies for Spanish science to reach its full potential. ■

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POSTDOC JOURNAL

Metamorphosis

Several of my colleagues are facing personal and professional transitions. They are starting their own labs, switching to jobs in industry or becoming first-time parents. As I watch them adapt to their new roles, I am reminded that I too will soon face change, as I'm two years into my postdoctoral fellowship. What next? Do I apply for a university lectureship or look for another postdoc? Do I leave the bench altogether and pursue an alternative career? What about my husband, who's also a postdoc, and his aspirations? And what about a family?

Having moved to a new country, a new field and even a new model organism, I feel I should be accustomed to change. After all, change is constant in science, where progress is made with imaginative ideas and innovative technology, not old assumptions and outdated techniques. Yet the prospect of another transition still elicits some anxiety.

Change challenges us to leave our comfort zones and to evolve. But transitions, while initially daunting, can be very rewarding. I have learned additional skills, used novel technologies, met interesting people, and gained new insights about my work and myself. I think it's especially true in the case of scientists that an ability not only to adapt to change but also to anticipate it will help the ambitious individual soar above even his or her own expectations. ■

Maria Thelma Ocampo-Hafalla is a research fellow at Cancer Research UK's London Research Institute.