

Don't stop me now

Unlike their US counterparts, European scientists can be forced to retire while they're still productive. But some in Germany are finding ways to go on. **Britta Danger** reports.

A year after the German physicist Theodor Hänsch won a Nobel prize he hit 65, and faced mandatory retirement from his posts at Ludwig Maximilians University in Munich and the Max Planck Institute of Quantum Optics in Garching. But Hänsch wanted to keep on working, putting the government in a potentially embarrassing position. The culprit was German civil-service regulations — because German university staff are classed as civil servants, they face mandatory retirement at 65. Numerous German researchers have been forced unwillingly into retirement as a result. But new initiatives could help German veterans continue to generate good science well into their golden years.

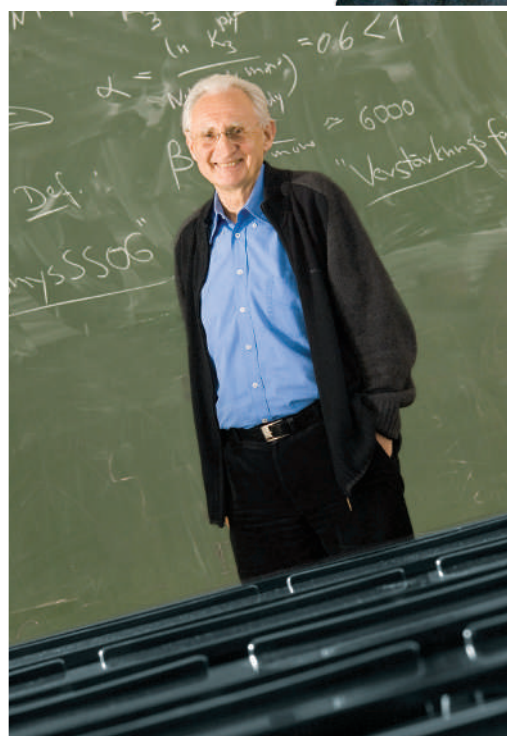
Hänsch himself has found a way to stay on in academia for at least five more years, but he owes his career extension to an exceptional initiative sponsored by the state government of Bavaria, the Carl Friedrich von Siemens Foundation and the Excellence Foundation for the Advancement of the Max Planck Society, which are collectively funding him to continue.

Moves are afoot to make such exceptions more the norm. To retain senior talent, the philanthropic Hertie Foundation, which funds neuroscience research, inaugurated Germany's first 'senior professorship' in July 2006. Only scientists over 60 were eligible to apply. Neurophysician Thomas Brandt, 63, a specialist in balance disorders, won the first award, which will allow him to keep working until at least the age of 68.

The Frankfurt-based foundation is currently the only German funding body that specifically gives grants to professors approaching retirement age. Without the grant, Brandt probably would have had to leave research, like dozens of experienced and highly qualified senior German researchers have to each year. Hänsch and Brandt are rare exceptions, but such cases may soon become more widespread. Private funding saved their research, and public agencies are getting increasingly interested as well.

Senior service

The situation is less clear outside Germany. Although a European directive has recently led member states of the European Union (EU) to implement age-discrimination laws, these tend to cover only employment rights up to the age of retirement. The result is somewhat confusing. In Italy, academics must either retire at 70, then request a two-year extension, or retire at 65 and continue for three years at full pay, without teaching. But the second option is rarely approved, as it places a higher pay burden on the universities. In Austria, academics must retire at 65, but can apply to extend their tenure to 68. In Switzerland, technical university professors must retire at 64 if they are women and 65 if they are men,



Nobel laureate Theodor Hänsch (top) and Jürgen Wolfrum: still at the peak of their powers.



although there have been some exceptions. The issue could even get more complex, as the shift towards an ageing population leaves countries considering whether to revamp their rules.

In Germany, a variation in the retirement rules among its 16 states could provide an impetus for change. In some states, professors can stay in office until a successor has been appointed. Some stick to the mandatory retirement laws; others allow an extension. In Bavaria, an extension until the age of 68 is possible, but is not

guaranteed, regardless of how many publications or ongoing projects the researcher can show. And in Lower Saxony, the retirement age will become 68 this month.

Germany's science minister, Annette Schavan, says that Brandt's award could be pivotal for pushing back German scientists' retirement age. "He is a pioneer," she said in July 2005 at the ceremony marking the award of the first of the Hertie Foundation's senior-scientist grants, where she promised to change some of the outdated rules governing Germany's academic system. She was critical of the fact that staff are dismissed and projects interrupted just because a scientist is being forced to retire, saying the rules are out of date (see *Nature* 442, 341; 2006). "The rules are from the last century and don't fit in our century any more," she said.

At the award ceremony, Schavan announced a programme through which senior professorships will be made available to outstanding older scientists throughout Germany. She noted that although the first

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NEVER TOO LATE

Learning capability and efficiency decline as people get older — but they have many skills that can more than compensate, according to the late psychologist Paul Baltes, an expert in ageing and a leading voice in the German debate, who talked to *Nature* before his recent death. “Old people don’t pick up new things so easily, he said. “But they have other strengths.”

Baltes favoured a model that would encourage senior scientists to compete for a new position at a different university once they reach 65, to prove they can still be productive. He thought that the selection criteria should be stringent, and that only the best should actually make the cut. “Only a small proportion ages in excellence,” he said. **B.D.**

Klaus Rajewsky: never mind people’s age — what research is getting done?

priority should be to improve career prospects for the young, she also plans to launch a programme later this year that would allow universities and research institutes to create senior professorships for top-class scientists over the age of 65.

Germany’s current retirement rules risk causing a brain drain of eminent scientists from the country, which programmes to support older researchers could help to counter. Like many successful older German scientists, Hänisch had numerous offers from US universities to continue his career there; offers that increased after he won a Nobel prize. “It would have been extremely embarrassing to German science officials if I had left shortly after the award,” he says.

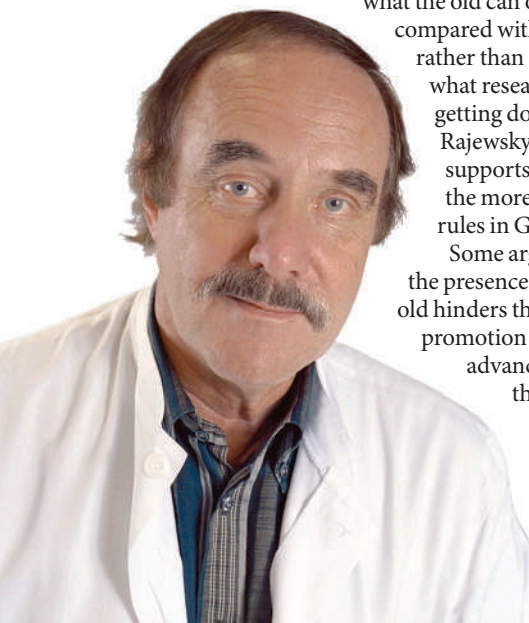
Home from home

A mandatory retirement age was abolished in the United States in the 1990s following a lawsuit by researchers who claimed unfair discrimination. The country is now the most popular destination for older scientists with good publication records and an active network of international colleagues.

Geneticist Klaus Rajewsky, now aged 70, became famous for the knockout mice he developed while at the University of Cologne. In 2001, six months before he was due to retire, he moved to the Institute for Biomedical Research at Harvard Medical School in Boston, Massachusetts, taking with him 10,000 transgenic mice. “There is too much reflection about

what the old can or cannot do compared with the young, rather than discussing what research is getting done,” he says. Rajewsky strongly supports adopting the more flexible US rules in Germany. Some argue that the presence of the old hinders the promotion and advancement of the young.

“To foster young scientists is the priority,”



Thomas Brandt: first to win a senior scientist’s grant.

says Beate Konze-Thomas, chief of the department of advancement of programmes and infrastructure of the DFG, Germany’s main science-funding agency. The argument goes that if some senior scientists stay on for many years, they might prevent postdocs and young group leaders from becoming independent and showing their abilities to the full. But this does not usually apply to the best and most experienced older professors, says entomologist Bert Hölldobler of Arizona State University in Tempe. Most of them have spent much time and effort attracting and teaching as many talented young minds as possible, passing on their experience and the benefits of their reputation.

Experience counts

Hölldobler, 70, a native of Germany, was a professor of biology at Harvard University from 1973 to 1989, at which point he was appointed professor at the university of his student years in Würzburg, Bavaria. He was amazed by its strict retirement rules. “Why did they make me come if they didn’t want to exploit all of my capacities?” he asks. He left Würzburg in 2004 to continue his scientific activities at Arizona.

“Older professors can really strengthen the standing of a university,” says Brandt. He proposes a model for good coexistence of young and old: each university should create a few positions for excellent older scientists with designated laboratory space. This would require a small amount of money on top of the researchers’ regular pension. The risk, says Brandt, would be very low, because the only scientists chosen would be those who are still successful in producing results and attracting grants. Continuing quality could be assured by regular evaluation (see ‘Never too late’).

There are other ways of getting round the age barrier and retaining the expertise of older scientists. The research institute Bioquant, created by the University of Heidelberg in 2001, specializes in interdisciplinary analysis of macromolecular complexes. Founding director Jürgen Wolfrum, 67, a specialist in laser applications, oversees research and leads the Bioquant’s board of directors, along with two younger colleagues.

The institute will span not just disciplines, but ages. But the groups draw upon the experience of some scientists, such as Wolfrum, who are past the traditional retirement age. “We create space for several junior groups,” Wolfrum says. “The young scientists deliver new ideas, but I have a better general outline so I know about the practicability.”

Wolfrum compares dedicated scientists to artists, who tend to carry on working regardless. “An enthusiastic scientist doesn’t stop thinking just because he or she has reached the age of 65,” he says. ■

Britta Danger was an intern in *Nature’s* Munich office.