competitive atmosphere", says Cherry Murray, a physicist who spent 26 years at the lab in research and management positions, including research vice-president, and is now dean of the Harvard School of Engineering and Applied Sciences in Cambridge, Massachusetts. "You were given some leeway, say for a few years after your arrival, to build up your research programme," she says. But those who consistently stayed in the bottom 10% after that — who weren't exploring imaginative, original ideas as assessed by their managers, and whose research never led to an invention or the possibility of one — were politely asked to leave. Evelyn Hu, an electrical engineer at Harvard who spent nine years as a Bell researcher, recalls a chilling prophecy from company management early on. "I remember attending an orientation for new hires and being told, 'Look to your right, look to your left — in five years, only one of you will be here'," she says.

Those willing to embrace the pressure may face other constraints. The small size of labs in limited-contract institutes can be inhibiting, says Chris Field, director of global ecology at Carnegie and a biologist and environmental Earth systems scientist at Stanford University in California, where he conducts his research but gets no financial or other benefits. "There are some people for whom Carnegie becomes a stage that's not the right size," he says. "Some people find that as they move through their programme, they're more interested in building a bigger lab group."

E. GRINNELL/HARVARD UNIV.

"It was an incredibly highly competitive atmosphere."
Cherry Murray

Those running small labs can risk losing a critical mass of personnel, says Douglas Koshland, a geneticist who spent a long time at Carnegie but accepted a tenured position at the University of California, Berkeley, last year. "If you have four people and two leave, then you've got two left, and that can be painful," he says. But Koshland is still a proponent of small labs, pointing out that the same reduced lab size also enables principal investigators to actually do research, rather than just supervise a dozen or more junior researchers.

Jim Broach is a molecular biologist at Princeton University in New Jersey, but he began his career at Cold Spring Harbor. It was lack of teaching, not of tenure, that drove him into academia. "Postdocs aren't as eager to explore new ideas as graduate students," he says, noting that Cold Spring Harbor does now have an on-campus graduate programme, the Watson School of Biological Sciences, founded in 1999. "Teaching benefits your research — you learn to formulate your questions more precisely and you learn how to organize and present your ideas in a very powerful way," he says.

SOFT LANDING

Being asked to leave a place such as Janelia does not usually spell disaster. Murray notes that any researcher who, voluntarily or otherwise, left Bell while she was there had no problem finding an industrial or tenured academic research position elsewhere. For some, that is a fair exchange. Joanna Aizenberg, a materials scientist at Harvard, spent nine years at Bell, where she loved her work. But when the company began to move away from a basic-research focus to concentrate more on applied, product-driven research, she decided to resign. Shortly after Aizenberg left the company in 2007, she accepted an offer at Harvard. "It's obviously wonderful to have tenure," says Aizenberg, "and to think that whatever happens, I have it."

At Janelia, group leaders who don't receive a renewal offer for a second term will get transitional funding of up to US$1 million a year for two years, a bonus that significantly boosts their recruitment value. Those who get a renewal offer but decide to leave anyway can take their HHMI investigator status, and they get the same transitional funding. "You show up with a really big cheque in your pocket — that's really valuable in academia," says Tim Harris, director of the applied physics and instrumentation group at Janelia. At the LMB, those who are asked to leave are given a month's pay for each year they've worked at the Medical Research Council, up to a maximum of 21 months, and get about a year's notice before they actually have to leave. At Cold Spring Harbor, researchers are reviewed four years into their five-year contracts, so if they are asked to leave, they still have a year to find a job, and may have some money left over from their start-up packages. At Carnegie, departures are often based on mutual agreement. Scientists who go elsewhere receive a lump sum representing their unused annual leave.

Supporters of the short-term model note that tenured academic positions are tough to find — and, in any case, few jobs have long-term guarantees. "Having any job in research, especially now, is such a gift," says Hess. He says researchers should focus on their innovations, rather than on how long their jobs will last. "For me, the reward has always been on the positive side — what's exciting, what's new, and to not be fear-driven about when my job might end," he says. "It's really a blessing to have this kind of opportunity — where people pay you to do what you love doing." ■

Karen Kaplan *is assistant Careers editor at* Nature.

UNIVERSITY SCORING

Movement in the ranks

The California Institute of Technology in Pasadena ranked first for physical sciences in the 2011–12 World University Rankings for subject areas, released last week by *Times Higher Education* (*THE*) in London. Harvard University in Cambridge, Massachusetts, topped the list for life sciences. Changes to the criteria, including a longer collection period for citations, contributed to differences from last year: Pierre and Marie Curie University in Paris rose from 191st place to 30th in physical sciences, and Wageningen University and Research Center in the Netherlands soared from 166th to 17th in life sciences. The *THE* based its findings on indicators in five weighted groups, including research, citations per paper, teaching performance and international engagement. US institutions dominate, but Phil Baty, deputy editor of the *THE*, predicted that China, with its increasing science investments, will soon have a greater presence.

NETWORKING

Mentors wanted

A US science-mentoring service is seeking more advisers after a surge in demand. Since launching an enrolment campaign on Facebook, LinkedIn and Twitter in September, MentorNet, a non-profit group in Santa Clara, California, has signed up 320 graduate and undergraduate students, largely women and mainly from minorities, who want mentors in research and industry. Since 1997, MentorNet has made 30,000 connections, using grants and fees from about 100 US universities. The economy and tight university budgets have hindered expansion, but social media have helped to extend the service beyond member universities, says president and chief executive David Porush.

PHD CANDIDATES

Better student stability

More European nations should recognize doctoral students as employees, said Eurodoc, a Brussels group representing PhD candidates in the European Union, in a statement on 1 November. Norway, the Netherlands and Denmark already classify PhD students as professionals, and give them salaries and benefits. Adding stability and security could draw more people to research, says Sverre Lundemo, Eurodoc's mobility coordinator. Eurodoc is discussing the matter with the European Commission, he says.