

MOVERS

Robert Huber, professor, Cardiff University, Cardiff, UK



1971-2005: Director, structural-research department, Max Planck Institute of Biochemistry, Martinsried, Germany

1976-present: Professor, Technische University, Munich, Germany

2006-present: Visiting professor, University of Duisburg-Essen, Germany

Robert Huber's path to a Nobel chemistry prize wasn't immediately clear, as his secondary school in Munich focused on Latin and Greek. But his early fascination with the chemistry of minerals, born on walks in the nearby mountains, soon asserted itself. Studying chemistry at the Technical University of Munich in the 1950s, he delved into the newly developing field of crystallography.

Huber's experimental drive was the perfect complement to the theoretical focus of his doctoral mentor, Walter Hoppe. Huber elaborated on Hoppe's proposed method for molecular crystallography by experimentally determining crystal structures using molecular fragments. His dissertation elucidating the insect metamorphosis hormone, ecdysone, boosted his reputation. Switching to protein analysis, he deciphered the crystal structure of the insect protein erythrocrucorin, a blood protein similar to mammalian proteins. Prestigious offers followed, and he began a 30-year career as director of structural research at the Max Planck Institute of Biochemistry in Martinsried.

Taking advantage of refined crystallography methods and instrumentation, Huber teamed up with his former PhD student Johann Deisenhofer and colleague Hartmut Michel to tackle one of the most important molecular structural targets in biology — the photosynthetic reaction centre, which converts solar rays into electrical energy. Determining its structure, the first one determined for a crystalline membrane protein, earned them the 1988 Nobel Prize in Chemistry. This didn't significantly affect Huber's career, but it did help him attract even better students.

After retiring at 68, as dictated by German law, Huber recently accepted a part-time position to help form an interdisciplinary chemical-biology initiative: a programme linking the schools of chemistry and biosciences at Cardiff University in Wales. He will teach classes as well as advise on strategic investments and recruitment.

"He's helped us find a focus — the structural basis for drug development — to build our activities around," says Adrian Harwood, a biosciences professor at Cardiff. He adds that Huber's excellent track record in helping develop structural-biology programmes at other universities will catalyse the new initiative.

Huber plans to continue promoting the field by energizing students. "I saw structural biology being born, and now I see it almost matured, providing the basis for our understanding of biology and medicine," he says. ■
Virginia Gewin

RECRUITERS & ACADEMIA

Unhealthy choices

Health benefits are important in countries such as the United States, where there is no national health service. But US postdocs who win funding from sources outside their university often lose benefits and subsidized health insurance, as their institutions don't consider them employees, and the sponsoring institutions don't always provide enough funds to cover benefits.

The National Institutes of Health (NIH) is boosting health-insurance funding for its 7,000 National Research Service award-holders. Good news for NIH-funded postdocs, but the problem goes wider. Benefit options vary greatly among society, government and foundation funders.

According to the 2005 Sigma Xi Postdoc Survey, only a third of postdocs are classified as employees. Still, 97% said their institutions made health benefits available to them, and 82% said families could be included.

But this doesn't reflect a plan's quality, cost or convenience. When Eric Tytell began his NIH fellowship at the University of Maryland, he was told the university's insurance came with so much red tape that if he had any other option, he should take it. He became a dependant on his wife's plan. Adam Breier at the Massachusetts Institute of Technology had to switch

doctors and health plans when he received an NIH fellowship midway through his postdoc; the price of his former plan "was no longer realistic".

Institutions have got better at finding ways to cover non-employee postdocs, says Chris Blagden, a board member of the National Postdoctoral Association. Confronted with postdocs' reluctance to accept NIH fellowships, Case Western Reserve University in Cleveland, Ohio, decided to give the same benefits regardless of funding source, says administrator Rachel Begley. Postdocs are a young, healthy and temporary population, so treating them separately from faculty members and staff means institutions can offer a comprehensive package at a lower cost, says Mary Anne Timmins of the biomedical postdoc programme at the University of Pennsylvania. The University of California has created a separate benefit programme for postdocs on its ten campuses.

But Blagden warns that no solution can fit all institutions, and fixing one problem can cause others. Foreign postdocs who aren't classed as employees can face visa troubles, for example. And postdocs have to look out for themselves, he says. "You have to be aware that the institution doesn't always give you the best choice." ■

Monya Baker

GRADUATE JOURNAL

Roller hockey or science?

What would you be doing if you weren't a scientist? That's what I asked my classmates at the end of our second year of graduate school. By then they'd begun to recognize the difficulty of a career in science. The list of dream alternatives was impressively diverse: four restaurateurs, two concert violinists, one dancer, one fashion designer and a professional roller-hockey player.

What struck me, re-reading this list recently, is how many people's idealized career alternatives were their hobbies. I guess this makes sense. Advice columns are always telling you to make your passion your career. That's what attracted most of us to science in the first place. We were the ones building batteries out of stuff we found in the garage and trying to culture microorganisms from the vegetable drawer. But that childhood passion never included writing grants, rushing to publish or scheduling your life around your experiments.

Then again, I doubt that the would-be restaurateurs were thinking about health inspections or the aspiring singers about contract negotiations. As graduate school has become progressively more stressful, I've increasingly had to remind myself of the passion that brought me here. My hobby — cheese making — helps. I'm not actually tempted to do it professionally, but watching microbes transform milk in my kitchen is still a thrilling display of science. ■

Milan de Vries is a molecular-biology graduate student at the Massachusetts Institute of Technology.