NATURE|Vol 439|26 January 2006

MOVERS

Alan Hall, chairman, cell biology programme, Memorial Sloan-Kettering Cancer Center, New York

2001–06: Director, MRC Cell Biology Unit and Laboratory for Molecular Cell Biology, University College London, UK
1993–2001: Professor of molecular biology, University College London
1981–93: Group leader, Institute of Cancer Research, London

Alan Hall has made his mark in cancer research, but he admits he fell into it almost by accident. He started off in chemistry, studying enzymes as a PhD student at Harvard University. It was the mid-1970s and the molecular biology revolution was under way. He realized that he was more likely to find a long-term, productive future in molecular biology than in enzymology.

"It was clear molecular biology was having an impact on virtually every area of biology," says Hall. And so the stage was set for a career that will take him from Britain to New York this spring, to head the cell biology programme at the Memorial Sloan-Kettering Cancer Center.

Wanting to switch into molecular biology after his PhD, Hall looked for postdoctoral positions in molecular biology labs. His first project at the University of Edinburgh in Scotland didn't work out so well, so he went for another postdoc at the University of Zurich. It was there that Hall mastered the tools and techniques of molecular biology. But he was still looking for an area in which to apply them.

It so happened at the time that Robin Weiss, the director of the Institute of Cancer Research in London, was looking to hire some molecular biologists. Hall was put in touch with him and he landed his first job there in 1981.

It was an exciting time to be doing cancer research. Biologists were beginning to discover the first human cancer genes. Hall and his close collaborator, Chris Marshall, soon became part of this group. In the early 1980s, they identified the third and final of the *Ras* genes, which are involved in 30% of cancers.

After 12 years there, Hall was looking for a change, and so he went to University College London. In his twelfth year there, as he began thinking about his next move (Hall jokes about having a "12-year itch"), he was invited to give a seminar at Memorial Sloan-Kettering. He received an e-mail a few months later about an opportunity to work there. The centre's cell biology programme is growing and the chance to help shape that growth was an incentive for Hall to join the centre.

He says postdocs these days need to be more directed earlier in their careers than he was. He advises young scientists to be careful that they don't always latch on to the latest fad. "Some fads, in retrospect, end up being minor technological breakthroughs," says Hall. Although he switched to molecular biology, it turned out, luckily for him, to be much more than just a passing fad. ■

Corie Lok

BRICKS & MORTAR

Nanoscience factory

By spring, the $84-million Molecular Foundry on the Lawrence Berkeley National Laboratory (LBNL) campus will allow staff and visiting scientists to begin making new types of nano-scale material — and to help "fact check" existing ones, says Steven Chu, director of the LBNL in Berkeley, California.

Vetting newly created materials is very important in nanotechnology. Many scientists are creating new types of molecule, that, if duplicated, could benefit their colleagues. But few labs are equipped to fully characterize these creations, duplicate the synthesis consistently and watch for fraud.

"There are all sorts of claims in the literature that if you follow this procedure you can make this molecule," says Chu. "Sometimes these processes are less than reliable."

Not only will the foundry have its own nanofabrication, computing and microscopy equipment, but it is also near other unique infrastructure. The Advanced Light Source synchrotron will enable scientists building nanomaterials to quickly obtain three-dimensional images and other structural data. The centre will also benefit from the National Center for Electron Microscopy and the largest US Department of Energy supercomputer available for non-classified research, both at LBNL. This equipment will help scientists better understand and make predictions on the properties of their novel nanoscale materials.

The Molecular Foundry is recruiting two broad categories of scientists — one to help visiting users tap into the centre's nanofabrication capabilities and another to conduct research on nanostructures. There will also be a group of theoretical scientists to help steer the development of new nanomaterials.

The centre will have a "very strong biology component", says Chu, mirroring the Nobel laureate's interest in biophysics. About a quarter of its $20-million operating budget will be devoted to biology-related projects. The biological nanostructures labs will be equipped to do mammalian and microbial cell cultures, molecular cloning and genetic and protein engineering.

About 40 projects have already been approved, with two or three people on each. "That's going to grow," Chu says. He adds that the foundry's access to unique computing and imaging resources, as well as its programme of constructing both published molecules and new ones, will attract top people in the field. "It should be nanoheaven." ■

Paul Smaglik is editor of *Naturejobs*.
www.foundry.lbl.gov

ALUMNUS JOURNAL

Taking to the air

I am writing this during a holiday in the Swiss Alps. The perspective from a mountaintop is fantastic as I reflect on the past year since I was a *Naturejobs* Graduate Journal writer. It also helps me see the bigger picture on my career.

If you asked me if I would do a PhD again, I would say "yes", even though I'm thinking about leaving academia after I finish this one. Applied biotechnology doesn't seem so hip any more, given the lacklustre funding situation and shrinking number of positions. And I worry about the unclear academic career path.

But I have created an extensive network and gained many valuable skills outside the lab through additional activities. I co-founded and built up the international Young European Biotech Network, where I learned how to build and lead teams and to create relationships with other organizations. I also gained selling and negotiation skills. Moreover, I got to know many people around Europe whom I would never have met at academic conferences.

Now, after talking to many people who have started their own companies, I am thinking about doing the same, and would encourage readers to do so too. Creating your own company has many advantages and an entrepreneur needs many of the same attributes as a scientist: creativity, persistence and an ability to work independently. Together with a couple of friends I am developing a business idea. In a couple of years, you may read about it in this journal... ■

Philipp Angerer is a fourth year PhD student in biotechnology at the Swiss Federal Institute of Technology in Zurich, Switzerland.