Simon Campbell CBE, FMedSci, FRS

Simon Campbell, current President of the Royal Society of Chemistry and recently the recipient of the 2006 Chemical Industries Association Individual Achievement Award, has had a successful career spanning 40 years as a chemist in academia and industry, and says he has enjoyed every single day of it. This zeal has translated into involvement in no less than three successful drug discovery projects: doxazosin (Cardura), amlodipine (Norvasc) and sildenafil (Viagra). But despite this track record, Campbell is quick to point out that to succeed in industry, chemists must be prepared for the fact that many of their best efforts fail.

"We synthesize a lot of compounds that don't go anywhere, drugs can reach the clinic and fail before and after marketing. Rudyard Kipling said 'If you can meet with Triumph and Disaster, and treat those two impostors just the same ... yours is the Earth and everything that's in it'. I believe there is a lesson there for drug discovery — you have to keep an even keel during both success and failure."

Campbell says that talented individuals who specialize in a particular field are crucial for successful drug discovery but they must also be willing to work together in multidisciplinary teams towards common objectives. As part of his role as President of the RSC he is therefore lobbying for better funding for education in the physical sciences, but particularly chemistry.

"I don't remember a particular point when I knew I wanted to study chemistry, but I liked it and I had a good teacher," he remembers. "Ensuring that chemistry features strongly on the UK curriculum and that we can attract the best teachers is something that we're working hard towards because it's crucial to maintaining a robust pharmaceutical and chemical industry."

Despite the closure in 2005 of the chemistry department at Exeter University, Campbell does think there has been a change in attitude over the past few years from government and funding agencies, and was pleased to see the recent reprieve for Sussex University's chemistry department.

"We've lobbied very hard against the closure of university departments and we welcome the government's 10-year plan for science innovation. The growing appreciation of chemistry over the past few years has been very satisfying. Clearly we've got to make sure that the funding really does increase for chemical scientists, but our message to governments and the funding councils is being heard."

“People tend to think that innovation scales, but I don't think it does”

One of the biggest problems that affects funding for chemistry, however, is the public perception of the discipline, and Campbell would really like to see an improved understanding of how chemistry is involved in all aspects of our daily life. "There is so much focus on genes, but genes are made up of just four relatively simple molecules. If we could change the public's view of chemical sciences then many other issues would be far easier to resolve."

It is not unusual for Campbell to initiate major change. Back in the early 1970s, after postdoctoral research in Chile, and at Stanford University in the laboratory of William Johnson — "the first person to really encourage creativity and innovation, and who taught me that collaborators must always be fully acknowledged" — he moved to Brazil to take on a visiting professorship at the Universidade de Sao Paulo. Campbell loved living in a Latin

society, experiencing the different values and making life-long friends, and his presence was crucial to strengthening the university's synthetic organic chemistry capabilities.

It was towards the end of his time in Brazil that Chuck Harbert, previously a Stanford colleague who had by then moved to Pfizer US, suggested that Campbell interview at Pfizer UK. Academia was in a very weak financial situation in the UK and there were virtually no chemistry jobs, so he found himself moving from the academic environment of a fledgling chemistry laboratory to take on a role as a medicinal chemist in industry.

"An academic career was my first choice", says Campbell, "but I went into industry with no second thoughts or regrets, have never looked back, and I never thought to change to an academic career when jobs later became available." When Campbell retired from Pfizer he had reached the position of Head of Worldwide Discovery and R&D Europe. Although he found the transition from academia to industry relatively easy, he admits industry was smaller and more personal then, and has concerns over increasing merger and acquisition trends.

"People tend to think that innovation scales, but I don't think it does. When we were most successful at Pfizer there were only 300–400 scientists in research. We worked in teams of a competitive size but everyone still knew each other." With current R&D organizations having thousands of research staff and multi-million dollar budgets, Campbell says it's difficult to understand how those teams work together and maintain personal contact. And although he advocates the use of automation and speed, he believes there is no substitute for taking time out to stare out of the window and mentally challenge ongoing research. "Drug discovery requires passion, commitment and often serendipity — it's not a mechanical event, it's not numbers-driven, it's a personal experience! Pasteur's famous dictum states that 'Chance only favours the prepared mind' — you need to be able to see what other people are doing and how you can apply it yourself. Very often that was the secret of our success."

Interview by Joanna Owens