Biochemistry as a career

by Deborah Smith
(Director of Postgraduate Studies, Department of Biological Sciences, Imperial College of Science, Technology and Medicine, London)

What does it take to become a successful biochemist? — and how do we measure that success? Is it in seminal theories leading to ground-breaking research? Is it in numbers of learned papers published? Or millions in grant income generated? Or patents filed? PhD students mentored? Undergraduates motivated?

Lots of questions at the start of a timely, special issue highlighting career progression in Biochemistry, when that discipline is becoming ever broader (at least as taught at Universities in the UK) — encompassing everything from structural biology through genetic engineering to molecular cell biology. Indeed, recent events at my home institution have reduced use of the word “biochemistry” to the name of a degree courses, while multi-disciplinarity has brought about an amalgamation of all things biological into a bigger (and better?) Department of Biological Sciences.

So what does it take to develop a successful career in biochemistry? The authors of the articles that follow, ranging in experience from a final year undergraduate to a former Head of Department, have plenty of ideas, many of which I can vouch for from my own career path. As I regularly tell first-year PhD students, a successful PhD depends on commitment, enthusiasm and a burning desire “to know the answer”. Good students are usually passionate about their work and want to tell others how exciting it is. They just need to develop those essential communication skills, both oral and written, that convince others of the veracity of that new and exciting data. Commitment, enthusiasm and good communication skills are just three of the qualities that are evident from the diary entries of all of our contributors — and I suspect for most of them, a need to “know the answer” may be what gets them out of bed in the morning!

In my view, a passion for science is the most essential ingredient for a successful career, whether in biochemistry, physics or any other discipline. As someone who has chosen to stay in academia, with all the demands that involves (so eloquently described by David Evans), I am aware of the difficulties associated problem of keeping back any time for activities outside work. These burdens are common to biochemists working in Universities, in industry and in government labs — as a colleague said to me recently “isn’t it strange how the more senior I become, the more other people have plans for my time?” But as long as I remain passionate about my research, all the other demands on my time somehow order themselves, and I make time for “my science”. Not as a “hands-on” researcher unfortunately — it is almost impossible to run proper experiments and juggle all the other commitments, a situation shared by many of my colleagues. But the talented (and enthusiastic) members of my research group make sure that I can retain my passion, even at arm’s length.

And do not underestimate the power of scientific passion in overcoming many obstacles: despite the doubts of my undergraduate colleague, Katie Smith, I still manage time with family and friends and do not work 7 days a week — well not often, anyway! Balanced against the hard work is the excitement of working in a discipline that has changed dramatically since my own undergraduate days — and which continues to surprise and astonish us with its complexity. Biochemistry underpins our world and a career in this area of science, whatever we call it, is a career for life.