

OBITUARY

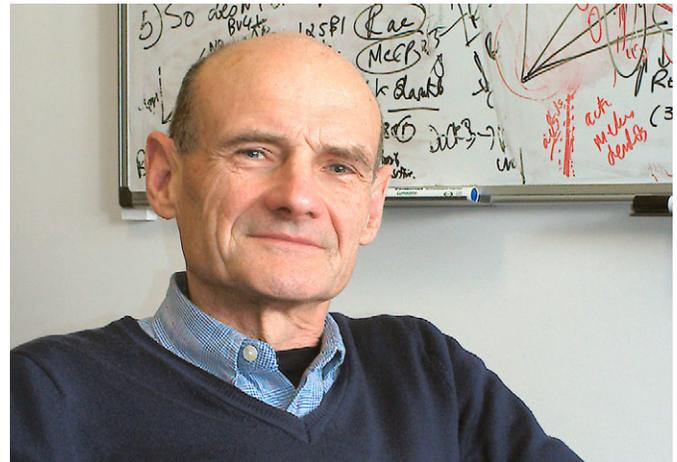
Chris Marshall (1949–2015) – a personal reflection and tribute

Erik Sahai*

Earlier this year Chris Marshall passed away aged just 66. He will be greatly missed. Chris was an exceptional scientist and a fantastic human being. His long and supremely productive scientific career has already been detailed in several obituaries. Here, I hope to convey a more personal account of the lessons about science and life that I learnt from him.

I joined Chris' lab as a postdoc in 1998. At first, Chris was an enigma to me. He was clearly a great scientist. He had cloned NRAS in the early eighties and made a fistful of seminal discoveries about the RAS–MAP kinase pathway in the decade that followed. However, when he ventured from his office into the lab he was equally likely to ask about an experiment, swear about colleagues, really swear about bureaucrats, or talk about the Spice Girls. I was somewhat baffled. As time progressed, I began to realise that Chris would quickly tire of chat about trivia. But science was different. He was so passionate about the subject. When discussing an interesting result, he could have a twinkle in his eye and a sense of wonderment at glimpsing a new secret of how cells worked. Having someone so eminent getting excited about your experiments was both exhilarating and motivating. It really made you feel that you were doing important work understanding the mechanisms of life and disease. It also helped to compensate for the gloom triggered by the more mundane travails of postdoc life, such as last week's failed transfection, disastrous western blot, or getting scooped. Chris' relentless enthusiasm for science is exemplified by a short story. When I got married a few years after leaving his lab, Chris was invited to the party and, fairly late in the evening, he proceeded to tell me about the RhoE–ROCK1 crystal structure solved by his colleague David Barford and Anne Ridley (it was accepted for publication but not yet out). I gently tried to suggest that I might rather discuss something else – it was my wedding party. Chris then leant forward, fixed me in his gaze and said: "What these civilians don't understand is that we are never off-duty".

As time went on, I grew to realise that he was intellectually fearless; not afraid of big reputations, new disciplines or emerging technologies. There was minimal bullshit with Chris: no posturing about how clever you are, just pursuit of the truth. His belief was that the basics of the scientific method could be applied to any problem: know what your question is, have a good assay, separate the variables and do the experiment. I remember being particularly struck by how Chris' long-time colleague Hugh Paterson solved a problem with a BIORAD confocal microscope by methodically taking it apart, rectifying the minor mechanical issue, and re-assembling it one morning. A confocal is not magic; it was subject to the logic and principles of physics and engineering. Similarly, Chris made it clear that, although the world around us is infinitely complex and sometimes profoundly baffling, progress can be made



Photograph courtesy of Hugh Paterson.

by the rigorous application of science. Chris also emphasised the importance of a loss-of-function experiment, something he attributed to his great friend and colleague Alan Hall. If you could get rid of something and it made no difference, then it wasn't that important. This was particularly important if you had ultimately hoped that your finding would contribute to a therapy to treat cancer patients. And findings made in Chris' lab did, indeed, contribute to the development of both BRAF and MEK inhibitors, which both are now used to treat cancer patients.

Chris was a wonderful inspiration as a scientist but, equally, his humanity shone through. As mentioned before, he would frequently wander out of his office muttering about something or someone. After a few months in the lab, you learnt to judge his mood depending on the tone and frequency of the expletives, and decode what his mumbblings meant. He disliked pomposity and his numerous utterings about people whom he considered 'stuck up' are as memorable as they are unprintable. He would share his opinions with anyone: the tea lady, security and maintenance guys were also all subject to his musings. Unfairness in all walks of life fundamentally annoyed him. This was reflected in the equitable way he treated all the members of his lab, not just the more successful ones. He could be very patient listening to and trouble-shooting problems. He would adopt the same principles of methodically isolating the variables to unpick why a PCR wasn't working as he would to other problems. He wanted people in his lab and his department to be happy. This manifested itself in day trips to France and karaoke parties. Although under most circumstances his team's happiness was beyond his control, just knowing that he cared was important.

Chris was a scientist to his core but he also had a vibrant life outside the lab. He was obsessed with all things cycling. At weekends he would often incorporate a visit to the lab as part of his ride and I vividly remember him, clad head to toe in Lycra, counting the focus formation assays that helped to prove that BRAF was an oncogene. Most of all, Chris was a family person. He would

Tumour Cell Biology Laboratory, The Francis Crick Institute, 44 Lincoln's Inn Fields, London WC2A 3PX, UK.

*Author for correspondence (erik.sahai@crick.ac.uk)

go doe-eyed at babies. His office had numerous photos pinned up; there was a sprinkling of his scientific friends but baby pictures dominated. Chris would be beaming when he had the opportunity to put up the photo of a baby recently born to a member of his department. Naturally, he was deeply devoted and proud of his children, Joe, Lucy and Francis, and, latterly, his four grandchildren.

Like many others, I will miss Chris greatly; but I will keep with me the things he taught me. To never lose sight of the fact that pursuing the secrets of biology and disease is an amazing thing to do. Science demands rigour and graft but life is also meant to have moments of fun. Enjoy the euphoria of gleaning a new scientific insight, and cherish your friends and family. Finally, I will remember how, at these moments, Chris' face would light up with a broad smile.