



Professor Alan L Harvey (1950-2020)

With enormous sadness, I learned that my friend and colleague Alan Harvey collapsed and died suddenly on October 2 aged just 70. I first got to know Alan on joining the University of Strathclyde as a lecturer in 1969 when he was still an undergraduate student, going on to obtain a first-class honours degree in pharmacy; we became friends soon after he too joined the staff of what was then the Department of Pharmacology on completing his PhD. Alan rose rapidly through the ranks, being appointed to a personal chair in 1986 at the age of 36, making him one of the youngest professors in the University. His PhD work, which included extensive work on bungarotoxins, stimulated his lasting interest in toxins from the venoms of various snakes and other venomous animals. He rapidly established an international reputation following his discovery of dendrotoxins, which arose from the observation that green mamba venom increased the

twitch height of isolated nerve–muscle preparations through a pre-junctional action (Barret and Harvey, 1979). In collaboration with Evert Karlsson (Uppsala), Alan showed that this was largely a consequence of a facilitation of the release of acetylcholine by a small protein subsequently called dendrotoxin (Harvey and Karlsson (1980). Later work (reviewed by Harvey, 2001) showed that dendrotoxins were potent inhibitors of neuronal potassium channels. Alan, together with Olga Castaneda and Evert Karlsson, went on to discover other potent potassium channel toxins, perhaps most notably ShK (Stichodactyla helianthus K-channel toxin) from the Caribbean sea anemone, *Stichodactyla helianthus*. A derivative of this toxin, ShK-186, now known as dalazatide, is highly selective for Kv1.3 channels which play an important role in subsets of T-cells and B-cells involved in autoimmunity (Tajti *et al.*, 2020); the drug is currently in clinical trials for the treatment of psoriasis. This highlights Alan’s major interest in drug discovery from natural products, which led to his appointment as Director of the Strathclyde Institute for Drug Research in 1988: the role of this organization, probably unique in academia at that time, was to bridge the gap between academic research and the pharmaceutical industry. Having been at Strathclyde, man and boy, for 45 years, Alan spent the last three years of his career at Dublin City University, where he made important contributions as Vice-President for Research and Innovation.

As well as generating a large number of excellent scientific publications, Alan’s research and enormous contributions to toxinology brought him a number of prizes and honours including the British Pharmaceutical Conference Science Award, the British Pharmacological Society’s Sandoz (now Novartis) Prize, the International Society of Toxinology’s Redi Prize, and, just last year, he was presented with a Lifetime Achievement Award at a Venoms and Toxins Symposium. For many years, Alan was Editor-in-Chief of the journal *Toxicon*, the journal of the International Society of Toxinology, and he was President of that society from 2012 to 2015.

Alan was always very modest about his achievements. On one of our early morning runs, which we did daily for most of a 30-year period, often accompanied by Eddie Rowan and anybody passing through Alan’s lab who expressed the remotest interest in running (!), he let slip that he had just completed an MBA from Strathclyde Business School in his ‘spare time’. When I asked him why he had done that, he told me that his frequent encounters with people from industry had made him fed up with being told that he knew nothing about business – the MBA was just to prove them wrong! I also remember when interviewed by the Times in 2008 for their ‘Prof of the week’ slot, the journalist asked him “Ever gone on any exotic expeditions?” to which he replied, in typical-Alan style “No, I’m a big scaredy. I once got invited on a trip to collect sea snakes but I didn’t go - I’m not much of a swimmer.” This kind of self-effacing remark was so characteristic of Alan!

Putting aside his tremendous scientific legacy, Alan’s greatest legacy, of course, is his and Jenny’s two wonderful children Helen and Brian and now their grandson Hector, whom Alan adored. He was immensely proud of Jenny, Helen and Brian and of their achievements, and was enjoying seeing Hector grow and develop. On behalf of all his friends, colleagues, former PhD students and postdocs around the globe, our thoughts and love are, and will remain with, Jenny, Helen, Brian and Amanda and Hector. We thank Alan for his friendship, his kindness, his mentorship and his humour - we shall all miss him hugely.

Brian Furman, November 2020

References

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