



**Professor James F. Mitchell**

**1930 – 2022**

Jimmy Mitchell was born in 1930 near Hampstead Heath, in North London. His father was a research chemist from Fife and his mother a school teacher. He was educated at Dauntsey's School in Devizes before undertaking his 2 years of National Service with the 13/18<sup>th</sup> Royal Hussars. Jimmy then went on to the University of St. Andrews, where he met his future wife Anne, to study for a BSc in Physiology. This was followed by a PhD on the "Properties and distribution of an active cerebellar factor".

Fresh from his PhD studies, Jimmy headed to Cambridge, to the ARC Institute of Animal Physiology, Babraham, where he was to work under Sir John Gaddum and Dr Catherine Hebb. During his time there they successfully demonstrated *in vivo* release of acetylcholine from the brain.

In 1963, Jimmy was appointed as Lecturer in Pharmacology at the University of Cambridge and a Fellow of Downing College. His research expanded into exploring GABA as a neurotransmitter and, with his PhD student Vasanta Srinivasan, he was the first to demonstrate the *in vivo* release of incorporated radiolabelled GABA from the brain surface following stimulation of inhibitory pathways. This pivotal observation was followed by the

experiments of Iversen and Neal, showing the release of endogenous GABA from the cerebellum.

Although Jimmy was, by nature, rather reserved, he was a formidable prankster aided and abetted at Cambridge by Alan Cuthbert, the Sheild Professor of Pharmacology. By all accounts, life was never dull during the time that Jimmy was in Cambridge. Some of these pranks included an exploding talc-filled condom, inserted by Alan into Jimmy's slide projector, interference with slides for each other's lectures and (quote) a busty beauty from Basel who was, allegedly, stalking Alan! On one occasion, a function at the O&C Club resulted in Alan chaining Jimmy to a cloakroom peg, necessitating his subsequent release by the Club Secretary. However, Jimmy had his revenge when Alan received an irate letter (supposedly from the Secretary, but actually from Jimmy) typed on O&C Club notepaper, asserting numerous misdemeanours committed by Prof Cuthbert. Alan was reportedly to have been very perturbed! In his recollections of Alan's life in 2016 Jimmy recalled that over a period of 50 years they had shared many happy, mischievous and sometimes marginally wicked moments!

In 1971 Jimmy was appointed Professor and Head of the Department of Pharmacology at the University of Bristol. He inherited a department which already had a well-established reputation in Neuroscience, especially in Neuroendocrinology. This presented an excellent environment for Jimmy to develop the Department's research interests, whereby the investigation of the role of neurotransmitter amino acids came to the fore, particularly with the appointment of Jeff Watkins with his unrivalled expertise in synthetic amino acid chemistry. He also recruited Dick Barlow who brought years of experience from his time at Edinburgh and made sure the younger members of the department did not forget that Pharmacology was a numerate and quantitative discipline. Jimmy continued to foster a sense of fun and misrule in the Bristol department and we had the distinction of the whole department being banned from a local pub after a beer throwing incident and nearly setting fire to a local restaurant when a member of staff put a real log on a fake fire!

At this time, the teaching of Pharmacology was almost entirely restricted to the professional MB, BDS and BVSc degree programmes. Under Jimmy's leadership, this was to change very rapidly – there was the introduction of a BSc honours degree in Pharmacology and an instructional MSc in Advanced Neuro & Molecular Pharmacology.

Many changes were now afoot and Jimmy soon found that being the Head of a growing and successful department left him with far less time to spend in his lab. His PhD students were given great freedom and encouragement to collaborate with others who were becoming amino acid neurotransmitter enthusiasts.

Looking back on those heady days, in the late 1960s and early 1970s, Jimmy's research into neurotransmitter release may seem only to be of historical interest, with the advent of today's molecular approaches. It is now possible, for example, to study real-time neurotransmitter dynamics *in vivo* using fluorescent nano biosensors. At the time, however, Jimmy's experiments were truly ground-breaking, at a time when many neuroscientists were highly sceptical that amino acids could possibly function as neurotransmitters. He was also prescient in encouraging work on neuropeptides in the mid-1970s before that field of research was fully developed.

Jimmy was a great supporter of the BPS and he served as Meetings Secretary (at a time when we met four times a year at university locations and the Society operated, not out of Angel Gate, but from a portacabin in Charterhouse Square) and then as President of the Society, as well as serving as Chair of the BJP Editorial Board. Two very successful meetings of the BPS were hosted in Bristol during Jimmy's time as Head of Department.

Jimmy published 75 scientific papers and co-authored, with Sir Arnold Burgen, the renowned Pharmacology textbook, "Gaddum's Pharmacology".

In 1991, Jimmy retired from the University of Bristol, which enabled him to indulge his great hobby of building and flying magnificent large model aircraft at over 100 mph. His "air force" consisted of at least 12 aircraft, including an eight foot-span Spitfire.

Jimmy's beloved wife, Anne, died in 2021 and Jimmy left us on October 11<sup>th</sup> 2022. He leaves behind his children Ruth, Mark and Juliet; Grandchildren Maya, Ella, Annie, Kirsten and Josie and Great Grandchild, Che. Following a celebration of Jimmy's life, held in Bristol on 31<sup>st</sup> October, his environmentally-friendly coffin, decorated appropriately with images of Spitfires and Hurricanes, was escorted with glasses of Prosecco to the rousing accompaniment of the Dam Busters' March.

*Peter Roberts & Ray Hill*