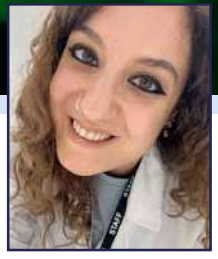
MASSMATTERS

The official publication of the British Mass Spectrometry Society Edition 97 - Spring 2023

REPRINTED FROM BMSS MassMATTERS Edition 97 - Spring 2023

Smokin'!

Laser Focused on Ambient Ionization



Special Feature: Jim Scrivens... p16

Reflections: Manuela Pacciarini... p21

BMSS BRITISH MASS SPECTROMETRY SOCIETY

SPECIAL FEATURE: MEMORIES OF JIM SCRIVENS

In Memoriam: Memories of Jim Scrivens

The Mass Spectrometry community was deeply saddened by the passing of Prof. Jim Scrivens in January 2023. Several if Jim's friends wished to pay tribute with the recollections of their dear colleague.

Remembrance words courtesy of Jon Williams

Jim with the Cyclic IMS device on which he spent his latter years researching with Waters

It was very sad news to hear our Mass Spectrometry family and Scientific Community lost Professor Jim Scrivens. I had only recently found out the full extent of his illness and battle. I always had scientific support off Jim and he helped me many times during my career. I will always be truly grateful and thankful for the opportunities and help he offered me.

In the 1990's during my PhD research, I spent one year working with him and his Group in ICI Wilton, Teesside. It was a steep learning curve. The MS group at ICI included Mike Taylor, Tony Jackson, Richard Jennings and George a team of incredibly good mass spectrometrists, who certainly helped me get a better understanding of MS during that time. The ICI laboratory was full of interesting instrumentation ranging from a massive sector-type instruments, quadrupole, TOF, etc coupled with a range of interfaces such as GC and LC. Maldi, ESI, EI, FD, FI were just some of the ionization techniques being employed daily to solve problems in the lab. During my period at ICI, Jim acquired an LCT from Micromass and had access to an Autospec-oaToF. Jim had close links with Micromass and he would often remind me of how much he respected their excellent instrumentation and scientists. So, thanks to Jim this is where my journey with TOF instrumentation began. Following my research, I worked as a Demonstration Chemist of the LCT for a number of years in Wythenshawe. The number of units our ToF team sold during that period was incredible.

In 2004 Jim offered me a position at Warwick University. The project was to look into the 'shape' of biomolecules using an Ion Mobility-MS in collaboration with Micromass/Waters Corp. I will be forever grateful that Jim asked me to join him on this project. I spent a significant amount of time driving up and down the M6 but it was a rewarding experience working with Kevin Giles and Bob Bateman. After a number of years working on applications on the prototype instrument, the first commercial Ion Mobility-Mass Spectrometer was launched. Jim was so excited. I remember him saying that the instrument will truly be a 'game-changer'! He was not wrong! Jim was a good character and you could always hear his laughter in any building before you could precisely locate him. He was a good man and so passionate about ion mobility-mass spectrometry, mass spectrometry and all interfaces associated with it.

Whilst using the cyclic-Ion Mobility ToF Mass Spectrometer and Multiple Reflecting ToF technology in my latter years at Waters Corp. myself

and colleagues would frequently have visits from Jim and we would once again collaborate on interesting problems. Here is the last picture I had with Jim on one of his visits. It's easy to see which instrument he was going to use and that smile tells the story really of somebody who was very passionate about mass spectrometry-based techniques and Micromass/Waters Corp. instrumentation. I will be forever grateful. RIP Jim.

Remembrance words courtesy of Mark McDowall

I first met Jim Scrivens at the IMSC conference in Swansea (1985). I was a freshly minted PhD presenting a poster, of no significance, and Jim walked past and diligently scrutinized my work. He kindly assisted me by pointing out some of my dyslexic faux pas. Jim 'under full sail with all guns blazing' was a magnificent and somewhat intimidating vessel to behold.

Over the following 35+ years I got to know Jim firstly as a discriminating & catalytic customer of the MS company that I had the privilege to work for at that time. In later years we became firm friends collaborating on educational projects in India.

Jim was acutely aware of the upward trajectory of his life and the privileges that flowed from that. Jim was committed to nurturing future generations of scientists, wafting them onto the escalator of a career in Mass Spectrometry, ...and it was that strand of his personality that I knew best and admired.

In the 2010's we collaborated to deliver several one-week practical training courses in proteomics at Bangalore. Jim and members of the 'Scrivens Group' (Warwick University) traveled to India to deliver the course pro bono. Those events were always packed to capacity, dynamic, and greatly appreciated. At the end of each day we would fight our way through chaotic traffic to get back to our hotel. After a quick freshen-up the team would convene on the terrace with a bottle of something cold & crisp to decompress.

Jim, Kostas and Keith Jennings at their favorite pub!

Jim and I had coherent views on building a better more inclusive society but divergent opinions on the political strategies for making our respective visions a reality. Naturally that divergence of thought lead to entertaining discussions that lasted long into those balmy Indian nights.

I shall miss my old friend, ...and our conversations on the terrace!

Remembrance words courtesy of Kostas Thalassinos

I had the privilege of knowing Jim, who was not only my PhD and postdoctoral supervisor, but also my mentor and friend.

I first met Jim in 2002, where I visited him at Warwick to find out about a PhD project position in his lab. Jim picked me up from the station with two other professors and took me for lunch at the Bear Inn in Berkswell, a pub that would later become a cherished place for Jim's group for its many happy memories. During lunch we discussed my degree and research project, hobbies, and even my experience at a Joe Satriani concert the night before, over two pints of beer might I add. After lunch, I toured the lab and had further discussions with Jim about the PhD project. I was impressed with both the lab and Jim, and when I asked about applying, Jim responded by saying, "That was the interview, you were able to talk science even after two pints and all three of us bombarding you with questions. Take the weekend to think about it and let me know on Monday." It turned out that the other two joining us for lunch were Prof. Sir Howard Dalton who was then head of Defra and Keith Jennings Jim's close friend and mentor and the person who developed collision induced dissociation, a major development in mass spectrometry.

Jim grew up in a coal-mining valley in South Wales and later attended Manchester University where he earned a BSc, MSc, and PhD degree in Chemistry. He never forgot where he came from and was great at giving opportunities to others, regardless of their background, which I could relate to coming from a small farming village.

After his PhD Jim joined ICI's research centre in Wilton initially using NMR to characterise molecules adsorbed on chemical catalysts. He soon, however, became interested in mass spectrometry, and successfully introduced it as an analytical technique in several production and pilot processes. Jim always wanted to know everything there is about what he found interesting so he took over heading the mass spectrometry division but on the condition that ICI would pay for him to visit world experts in the field in order to learn from them.

In 1990, he was granted his wish and a sabbatical from ICI to visit experts in the US, where he spent time with some of the leading figures in the field. These included Mike Gross in Nebraska, Simon Gaskell in Baylor, Charlie Wilkins in Riverside and Klaus Bieman in MIT.

SPECIAL FEATURE: MEMORIES OF JIM SCRIVENS

For his encounter with Bieman Jim used to say, "He was the cleverest person I ever met, it felt like he took my brain out washed it all over then put it back in..."

Upon his return, he commissioned the first industrial four-sector tandem mass spectrometer, the ZAB-T, which was used to obtain field desorption MS and MS/MS to characterize complex formulations. Soon after the new ionisation method of MALDI was introduced, Jim pioneered its approach for the study of polymer microstructure and published numerous papers on the topic. The work on cation attachment led to a collaboration with Professor Mike Bowers and, together with Mike's group at UCSB Jim utilized IMMS to study shape-selective features in polymer systems. It also started a long-life collaboration and friendship between the two.

Jim was appointed as a Visiting Professor in the Chemistry Department of the University of Warwick in 1994 and as a Professorial Fellow in Biological Sciences in 2001. After a period (2001-2005) where he had joint appointments at ICI and Warwick, Jim retired from ICI and took up a full time Chair in the Department of Biological Sciences in 2006.

During his period with ICI Jim had also served on many Research Council committees and also served as Chairman of Governors of Ings Farm School (1996-2005).

One of Jim's great skills was the understanding of the close ecosystem that exists between industry, instrument manufacturers and academia and the need to bring everyone together to develop new solutions to solve challenging problems in science, something he was extremely good at and ahead of his time.

Over the years he developed a very close working relationship with mass spectrometry instrument manufacturers initially from VG in Manchester and then later, as they evolved, from Micromass and Waters. He was very proud of this and had many good friends there. It allowed him to be at the forefront of exciting new developments in our field and be the first to develop new and novel methods using these instruments.

His time at Warwick marked some major developments in our field. After his appointment in Warwick Jim, with funding from DEFRA, commissioned Waters to build a commercial mass spectrometer incorporating mobility separation, initially to study the misfolding of prion proteins. This became the successful SYNAPT range of instruments. For the first time people could have access to ion mobility analyses and nowadays all major manufacturers offer some form of ion mobility in their instruments. Having access to this new technology was for Jim and all of us there at the time like being kids in a candy shop. The group started exploring its use for a wide variety of applications; protein structure, proteomics, mass spectrometry imaging, ambient ionization, you name it.

He left Warwick in 2015 and after a small break he became Professor at Teesside University. There he established the Waters Centre of Innovation, He was also the academic lead on a Teesside and Centre for Process Innovation collaboration on the application of mass spectrometry approaches to support the design, manufacture, and characterisation of biotherapeutics.

As a supervisor, Jim was always generous with his time, advice, and resources. He would never say no to an experiment, he would argue with you about it but would never say no. He always paid for us to attend conferences, introducing us to other major players in the field. I learned a great deal just by sitting quietly in his office while the leading figures from universities and industry would come to visit him. He had a ton of energy, was always in high spirits, had a great sense of humour and the most distinctive laughter which could be heard from a great distance. He had two soft green leather sofas in his office and one of these industrial coffee machines with coffee always being available. The group would all pass by his office in the morning for a cup of coffee and a catch up. We developed some lifelong friendships with each other and are still in touch over the years. We would spend time discussing everything from the housing and benefits situation in the UK, to arts, science, Elaine and the boys and everything in between.

What I would not give to enter that office in Warwick one more time, pour two cups of coffee, sit in those comfortable green sofas, have a chat with Jim and hear him laugh. God knows there is a lot going on in world at the moment to talk about.

Goodbye Jim, thank you for you love, kindness and support.