

MASSMATTERS

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**BMSS: 50 years
of supporting
its members**

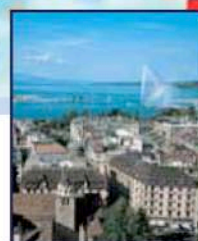


BMSS
BRITISH MASS SPECTROMETRY SOCIETY

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An Interview with the 2014 BMSS Medal Winner - Frank Pullen



Q How did you first get started in mass spectrometry?

A In 1971, I went for a job interview at Wellcome Research Labs in Beckenham. The position was for a lab tech to operate a mass spectrometer. During the interview I was shown this enormous piece of hardware called an AEI MS902, and it was 'love at first sight'. It stood there in all its 'stainless steel glory', with an instrument console which looked like something out of Dr Who, with loads of knobs and dials; well, who would not want to drive that, I thought, and fortunately I was offered the job. Training was really a thing of trial and error; every knob influenced the

way the ion beam moved through the analyser, and you learnt what to twiddle to get the best results. I learnt how to run chemists' samples using the wonders of high and low resolution, and how to understand and interpret EI spectral data. I learnt how to take this monster of a machine apart and fix it; learnt about how to clean ion sources, the joys of UV chart paper, the wonders of electronic valves; the joys of cleaning rotary and oil diffusion pumps etc. The job was never boring and always fun.

Q What are you most proud of in your career?

A Wow that's a difficult one, because, as I look back over the last

40 years, there are so many things that I feel proud of!! But I suppose, if I was pushed to single out one thing, that I am most proud of, it would be the fact that I have had the opportunity to work with some great people and be part of some amazing teams throughout my career. It is people and teams that have inspired me, and helped me create opportunities, and be part of some great science. People working together, sharing ideas, pushing boundaries and having fun is what science is all about, and so I would have to say that it is the people that I have learnt from, worked with, had fun with and helped develop, that give me a personal sense of pride and satisfaction.

Q What makes you want to come to work in the mornings?

A The opportunity to engage in good science. Mass spectrometry has been part of my life for over 40 years, and it still excites me, and I still get a buzz when things do not go to plan and produce different results from expected!! Mass spec is not just another boring detector, it is a tool that allows us to look at ions in a unique way; how cool is that!!!

Q Who are your scientific heroes?

A Well Heisenberg has always been one of my heroes; anyone who can develop an 'uncertainty' principle is to be admired!! In history then Thomson and Aston have to be up there in terms of my MS heroes, but also more recent people whose mass spectrometry books I read when I was starting out, people like Fred McLafferty, John Beynon, Dudley Williams and John Fenn etc, who were all down-to-earth people and were always happy to chat to you and encourage you.

Those people inspired me and made mass spectrometry so exciting and rewarding.

Q What advice would you give a scientist starting out in mass spectrometry?

A Don't be afraid to try things, there are still things which we don't know, and the only way to find out is by doing the experiment. Also, don't be afraid to ask questions; there is no such thing as a 'stupid question' and if you have ever been told that, then it is usually because the person who said it does not know the answer!! At mass spectrometry meetings, have the courage to go up and talk to the 'great and good'. When I was starting out, I always set myself a challenge to go and talk to at least one famous mass spectrometrist at every meeting I attended. Those 'old people' have a lot of knowledge, and they are always willing to share their experiences, if asked; you can learn so much by talking with those people. Finally, enjoy yourself; after all mass spectrometry could become a big part of your life, as it has been in mine, and I believe that you can only excel at something if it becomes your 'passion'.

Q What does the BMSS mean to you?

A Firstly I was 'blown away' at being awarded the BMSS medal, I never expected it, and I am still amazed that the society considered me worthy of such an honour. BMSS (in its many guises) has been the cornerstone of mass spectrometry within the UK since before I started out in the field. I can still remember the first meeting that I attended. I found that the MS community were an open and friendly bunch of enthusiasts, who were happy to share ideas and

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knowledge freely and also have a good time in the process. As I grew in the field I wanted to 'do my bit' to help the society, and in time I took over running the London Area Mass Spectrometry group, and then was successful in getting elected to the BMSS committee. I helped out in a number of roles from membership, through publicity secretary and eventually becoming chairman. During that time I was lucky to be part of the team that helped BMSS put together the successful IMSC Edinburgh bid and managed to pull off what I thought was a really great meeting. BMSS has been a big part of my life, and I have made some good friends through being a part of that great family of mass spectrometrists and, hopefully, I will continue to be an active member of the society for many years to come. The success of BMSS is, firstly, down to the committee who work very hard to ensure that the needs of the society members are catered for (not an easy task), but secondly and probably the most important factor, is it is down to the BMSS membership. It is the membership that has ensured the success of the society to date, and it will be the current and future membership that will ensure that the society is successful and continues to grow within the UK. I hope that the fun and great science that I have enjoyed over the years will continue to be experienced in future generations of mass spectrometrists within BMSS.

Q What has been your contribution to the development of the next generation of mass spectrometrists?

A This is another tough question! I could ramble on about the things that I have been involved in and the things that I am still working on, and how they have helped progress MS, but that would be boring and not what I think this is all about. Hopefully my contribution to the development of the next generation of mass spectrometrists has been through introducing young people to mass spectrometry, and sharing my enthusiasm and enjoyment of the technique. It is a 'hands on' subject, and I have always encouraged people to 'have a go'. You can only read so much in books and scientific publications

about mass spectrometry and how ions move under vacuum, but it is only when you have sat at that console and experienced how you can change a microscopic amount of sample into ions in the gas phase, under vacuum, (which in my mind is something of beauty), and eventually produce a mass spectrum, that you understand what an incredible technique this really is. There is no other analytical technique, in my humble opinion, which gets anywhere near to excitement of mass spectrometry.

Q What do you think the future holds for mass spectrometry?

A I think that we have seen some great advances in the field of mass spectrometry over the last 40 years and I cannot see that changing. At meetings I am always amazed at the variety of MS research that is going on, and the enthusiasm of the people presenting their work; as long as we have scientists and engineers with new ideas and a desire to push back the frontiers, then this powerful technique, that I have had the honour to work with, will continue to develop and grow. I think the future looks good, and I look forward to seeing our next generation of mass spectrometrists continue to come up with new and exciting ways to solve problems and develop new instruments and technology. The bottom line is that BMSS is a vehicle that enables the MS community to share ideas, celebrate successes, and push the boundaries. It has a great history, and hopefully a great future, and I am proud to be part of it and wish it continued success in the future.

Some thoughts from former colleagues...

I first met Frank when he was at Wellcome - longer ago than we would both wish to remember. I always found Frank enthusiastic about analytical chemistry and always encouraging to those less expert than himself. A really nice guy. *Pete Ryan, Director, KR Analytical.*

Frank, or more correctly Francis, joined the Wellcome labs at Beckenham as a very young man and as the son of a policeman I can remember him being dressed



in a dark blazer and behaving very correctly when he first worked for me. That soon changed! However, he was also a grafter and he has earned his rise to where he is now. The names caused a problem and to this day we are known as "Big Frank" and "Little Frank" - I'll leave you to guess. *Frank Cottee, Wellcome Research (retired).*

During the 18 years I reported to Frank at Pfizer, I found him to have the confidence and enquiring mind needed to try new ideas. He was not afraid of the occasional failure in pursuing novel objectives. I really enjoyed scientific discussions with Frank and it was typical of him that some of our off-the-wall discussions led on to major international projects. One of his greatest strengths is inspiring those around him to strive to innovate. *Adrian Wright, Head of Analytical Science, Cyclofluidic Ltd.*

THE BRITISH MASS SPECTROMETRY SOCIETY

THE BMSS

The British Mass Spectrometry Society is a UK registered charity, founded in 1964. The BMSS strives to encourage participation in all aspects of mass spectrometry on the widest basis, to promote knowledge and advancement in the field and to provide a forum for the exchange of views and information. The BMSS is committed to ensuring equal opportunities and reflecting the diversity of British society as a whole.

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