

## The 2009 ANZSMS Medallist - Professor Jim Morrison

To borrow some words from Fred McLafferty, “Professor James D Morrison is a true pioneer in the mass spectrometry of molecules with seminal contributions ranging from the fundamentals of gas-phase ionization to many unusual applications such as the basis of odours of honey, trees and wet-rocks”. To list all of Jim’s achievements would take more time than we have today but it is worthwhile to point to highlight, particularly for younger mass spectrometrists present, the significant impact that Jim has had on the field of mass spectrometry internationally and his seminal involvement in the development of many of the technologies we use in our laboratories everyday!

Jim’s background in X-ray crystallography at the University of Glasgow provided him with a unique perspective on mass spectrometry problems. In 1959 he developed an analytical process he called “deconvolution” to remove the smearing effect of energy spreads in ionization efficiency data. In pursuing this aim Jim employed one of the world’s first digital computers. Jim’s work was always at the cutting edge of combining rapidly emerging computer technologies with mass spectrometry, something we now very much take for granted! In 1964 Jim developed programs for cataloguing and searching mass spectral data, he also initiated the development of the SIMION software in 1973 to calculate potential distributions in electrode configurations and electron and ion trajectories and in 1969 constructed one of the first GC-MS systems controlled by a mini-computer. He also made huge strides in developing MS instrumentation, constructing the first fast-scanning laminated magnet mass spectrometer to overcome hysteresis effects in GC-MS and the first triple quadrupole mass spectrometer in 1974 (for which he is joint patent holder with Rick Yost and Chris Enke) and later the novel quinquequadrupole. Jim was not only a pioneer of technology but also a leader in the application of mass spectrometry in natural products chemistry, most notably the identification of active components in essential oils used in Traditional Bush Medicines published as “An Aboriginal Pharmacopoeia”. Very few mass spectrometrists have had such an impact on the field of mass spectrometry internationally and it is true to say Jim is a mass spectrometrist for all seasons!

To borrow again from Fred McLafferty “Not only has the progress of mass spectrometry been much more spectacular because of the creative and varied inputs of Jim Morrison, but it has also been far livelier, interesting and just plain fun.”

Jim Morrison is a very worthy recipient of the inaugural ANZSMS medal.