

Prof. Graeme Richard Hanson (16/7/1955–25/2/2015)

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Graeme Richard Hanson was born in Melbourne on July 16, 1955. He studied chemistry at La Trobe University and completed a B.Sc. with Honours in 1978, carrying out a research project involving synthesis of molybdenum compounds under the supervision of Prof. Tony Wedd. Graeme already then displayed all the hallmarks that were to typify his scientific life. In his typical, unassuming manner, Graeme continued this research as a Ph.D. student, adding enzymology to his extensive set of skills. Three papers published in the *Journal of the American Chemical Society* emerged from his postgraduate studies, garnering >200 citations. It was during these formative years that Graeme also met Profs. John Pilbrow and Keith Murray who, together with Tony Wedd, influenced the direction in his professional life in a major way by introducing him to the technique that would firmly establish his scientific reputation, electron paramagnetic resonance (EPR) spectroscopy.

Graeme joined Harvard Medical School to work with Prof. Bert Vallee, where he studied the function of carboxypeptidase A. Subsequently he returned to Australia (first at Monash University and ultimately at the University

of Queensland), where he re-established his collaborations with his former mentors. At the time of his passing, Graeme was a Professorial Research Fellow (promoted in 2002) at the University of Queensland and an Honorary Professor in the School of Life and Environmental Sciences at Deakin University in Victoria, as well as a Fellow of the Royal Australian Chemical Institute.

At the University of Queensland, Graeme established an EPR facility in the Centre for Magnetic Resonance (now Centre for Advanced Imaging) that would become ultimately the best in Australia and recognized as such internationally. In the process, Graeme emerged as a world leader in EPR, establishing this technique as an essential tool for electronic structure analysis, especially but not exclusively in biological systems and corresponding biomimetics. His profound understanding of the physics underlying EPR enabled him to develop the software suite XSophe, which is unique in its power and ability to simulate and thus reveal fully the physicochemical information contained in EPR data. This led to new insights in many areas including cyclic peptides (the patellamides) and metalloenzymes, areas that he studied in collaboration with Lawrie Gahan, Gary Schenk, and Peter Comba. There are many other areas where his input was decisive; for example, in work on copper–amyloid interactions in the context of Alzheimer's disease and in mechanistic work in the area of photosynthesis.

Graeme was very meticulous and persistent in his approach to research. Consequently working with Graeme could be both exciting and frustrating, but ultimately it was illuminating.

Graeme was a true altruist, taking on numerous service roles for the benefit of the scientific community. He had terrific financial acumen and served as the Treasurer for the Society of Biological Inorganic Chemistry (SBIC) for two consecutive terms and stewarded the development,

management, and strategic use of SBIC resources. He also served as a long-standing treasurer of ANZMAG, the Australian and New Zealand Society for Magnetic Resonance. In 2003 Graeme was Co-Chair (with Tony Wedd and Trevor Hambley) of the 11th International Biological Inorganic Chemistry Conference held in Cairns. Graeme played a critical role in ensuring the financial viability of that conference under very challenging circumstances. As late as December last year, Graeme was instrumental in the success, both scientifically and financially, of the Asian Biological Inorganic Chemistry Conference (AsBIC7) held on the Gold Coast, which he Co-Chaired with Sue Berners-Price.

Graeme was committed to supporting the next generation of scientists; for example, he worked tirelessly to secure travel bursaries for students attending the AsBIC7 conference, and he also established the AsBIC Early Career Awards, which will become a feature of future AsBIC conferences. The general perception of Graeme's kind-hearted character is best described by a former student (Dr. Vincent Grillo): "Graeme's generosity of intellect was surpassed by his advice, counsel, and warm friendship. It all contributed in making us who we are today... believing in ourselves and giving us the confidence to face life's challenges."

Graeme travelled extensively, acting as an ambassador for EPR and its various applications in biophysical research. In particular, it was often easier to locate Graeme

in the laboratories of colleagues in Russia or Germany, rather than in Australia. Germany, it is fair to say, became his favourite destination, his home away from home. In the last decade, he visited the University of Heidelberg and his collaborator and close friend Peter Comba at least once a year; he also had a strong collaboration with Wolfgang Lubitz from the Max Planck Institute in Mühlheim. Many of these colleagues remember the hospitality and time spent with Graeme and his family.

Graeme had an enormous influence on the people around him, students and colleagues alike, teaching the value of perseverance and thoroughness in pursuit of an answer. Above all, Graeme was a dedicated family man and together with his wife Lyn and children Jeff, Harry, Joanne, and Adrian, we and the scientific community will miss him dearly. To quote a colleague, "Graeme was a great man, a wonderful personality, very special, modest, gentle, supportive and patient, and a great scientist, very thoughtful, thorough, sincere, and restless in his search for answers. He lived in his own world, in the middle of a wonderful family, the international EPR society and the bioinorganic community. Graeme had a special humour, his way to enjoy life, he was a happy man."

Lawrence Gahan (with Sue Berners-Price, Peter Comba, Tony Wedd, Gary Schenk, and Trevor Hambley).