

36. Cao, X. P. *Acta Chim. Sin.* **2000**, *58*, 112–117.
37. Choi, S.; Koo, S. J. *J. Org. Chem.* **2005**, *70*, 3328–3331; Jeong, Y. C.; Ji, M.; Lee, J. S.; Yang, J.-D., *et al. Tetrahedron*, **2004**, *60*, 10181–10185; Ji, M.; Choi, H.; Jeong, Y. C.; Jin, J., *et al. Helv. Chim. Acta* **2003**, *86*, 2620–2628.
38. Bouchez, L. C.; Vogel, P. *Chem. Eur. J.* **2005**, *11*, 4609–4620.
39. Nicolaou, K. C.; Fylaktakidou, K. C.; Monenschein, H.; Li, Y.; Weyershausen, B., *et al. J. Am. Chem. Soc.* **2003**, *125*, 15433–15442; Nicolaou, K. C.; Li, Y.; Sugita, K.; Monenschein, H., *et al. J. Am. Chem. Soc.* **2003**, *125*, 15443–15454.
40. Nicolaou, K. C.; Zuccarello, G.; Ogawa, Y.; Schweiger, E. J.; Kumazawa, T. *J. Am. Chem. Soc.* **1988**, *110*, 4866–4868; Mlinarić-Majerski, K.; Pavlović, D.; Marinić, Z. *Tetrahedron Lett.* **1996**, *37*, 4829–4832; Chan, T.-L.; Hung, C.-W.; Man, T.-O.; Leung, M.-K. *Chem. Commun.* **1994**, 1971–1972; Doomes, E.; McKnight, A. A. *J. Heterocycl. Chem.* **1995**, *32*, 1467–1471; McGee, D. I.; Beck, E. J. *Can. J. Chem.* **2000**, *78*, 1060–1066; Wei, C.; Mo, K.-F.; Chan, T.-L. *J. Org. Chem.* **2003**, *68*, 2948–2951.
41. Edwards, J. O.; Pearson, R. G. *J. Am. Chem. Soc.* **1962**, *84*, 16–24.
42. Balci, M.; Sütbeyaz, Y.; Seçen, H. *Tetrahedron* **1990**, *46*, 3715–3742.
43. Cerè, V.; Minzoni, M.; Pollicino, S.; Ricci, A., *et al. J. Comb. Chem. Org. Chem.* **2006**, *8*, 74–78; Cerè, V.; Peri, F.; Pollicino, S.; Ricci, A. *et al. J. Org. Chem.* **2005**, *70*, 664–669.
44. Kozak, J. A.; Dake, G. R. *Angew. Chem. Int. Ed.* **2008**, *47*, 4221–4223.
45. Nicolaou, K. C.; Sarlah, D.; Wu, T. R.; Zhan, W. *Angew. Chem. Int. Ed.* **2009**, *48*, 6870–6874.
46. Winssinger, N.; Barluenga, S. *Chem. Comm.* **2007**, 22–36.
47. Isaka, M.; Suyarnsestakorn, C.; Tanticharoen, M.; Kongsaeere, P.; Thebtaranonth, Y. *J. Org. Chem.* **2002**, *67*, 1561–1566.
48. Baird, L. J.; Timmer, M. S. M.; Teesdale-Spittle, P. H.; Harvey, J. E. *J. Org. Chem.* **2009**, *74*, 2271–2277.
49. Barluenga, S.; Dakas, P.-Y.; Ferandin, Y.; Meijer, L.; Winssinger, N. *Angew. Chem. Int. Ed.* **2006**, *45*, 3951–3954; Bajwa, N.; Jennings, M. P. *Tetrahedron Lett.* **2008**, *49*, 390–393.

Obituary: Raymund Marshall Golding AO (1935-2009)

Prof R. M. Golding MSc (NZ), PhD (Canterbury), DSc (NSW) died at his Mooloolah home in Queensland on 21 November 2009 after an illness of some months. He was a Fellow of NZIC (1966) and its 1967 Easterfield Medal recipient. He had distinguished scientific and academic careers on both sides of the Tasman.

Ray was born at Westport on 17 June 1935 to parents who were teachers in the Buller area. He received his secondary schooling at Auckland Grammar (1949-53), and attended Auckland University (1954-57) gaining MSc (Chemistry, 1st Class). He became a Scientific Officer in the Dominion Laboratory (later Chemistry Division, DSIR) in 1958 and then, in 1960 he took up a NZ National Research Fellowship at Cambridge University gaining his PhD in 1963. On return to DSIR he was appointed head of a new Theoretical Chemistry Section and he set about putting each of three relatively new spin resonance techniques, NMR, ESR and Mössbauer spectroscopy on a sound theoretical footing. The latter technique, introduced to NZ by the late Prof James Duncan, was the catalyst for a fruitful Golding-Duncan collaboration during the 60s. During this period Ray also completed his first book *Applied Wave Mechanics* (van Nostrand, 1969) which resulted, largely, from a two-year post-graduate lecture series given during 1964 and 1965 at VUW.

In 1968 he applied successfully for the vacant chair in Physical and Theoretical Chemistry at the University of New South Wales, a position that he held until 1978 whilst maintaining his contacts with NZ science and academia. David Rae (AU and DSIR) joined his staff as lecturer and the writer was a Teaching Fellow in his department (1969-71). Other postdoctorals/Visiting Fellows included Margaret Halton and Gary Burns (VUW), Barrie Peake (UC, later Otago) and Helen Bergen (Massey). In 1978, Ray became Pro-Vice-Chancellor at UNSW, a position that he held until 1986. In this capacity he was largely responsible for setting up the Australian Defence Force Academy in Canberra. In 1986, he became Vice-Chancellor at James Cook University in Townsville, a position that he held until his retirement in 1996. During his tenure at James Cook, the university doubled its student numbers, expanded its course offerings by a factor of three, became a multi-campus university with associated commercial companies, and doubled its assets. For services to education, science and the arts he was awarded Officer of the Order of Australia, General Division, in 1994.

As a scientist, Ray had an extraordinarily wide range of interests that did not cease when he moved into university administration. Together with one or two enthusiastic Research Fellows, he con-

tinued to work and publish in subjects that ranged from abstract group theory and quantum mechanics to medically-oriented publications and, until ill health intervened in mid-2009, effects of climate change. During his 10 years at James Cook he drafted 9 of 11 chapters of a new advanced text on quantum mechanics, a book eventually published in 2008. Ray's versatility is evident from his authoring of more than 120 research papers, a book chapter, and the following four books:

Applied Wave Mechanics, van Nostrand: London, 1969; *Chemistry, Multistrand Senior Science for High School Students*, 1975; *The Goldings of Oakington* (A complete history and family tree of the Golding family of Oakington, Cambridgeshire from about 1650), 1992; and *Quantum Mechanics in Chemical Physics – an Exploration*, Common Ground Publishing, 2008.

Despite this full life, Ray was also Board Member/Director/Chairman of around 20 organisations from 1986. These include The Board of Senior School Studies NSW (1975-86), The Australian Festival of Chamber Music Pty. (1990-96), and The Australasian Marine Science Consortium (1984-2002). Apart from his FNZIC, he was a Fellow of the RACI, the Institute of Physics (UK), the Royal Society of Arts, the Australian Academy of Technological Sciences and Engineering, PICON International, and the Royal Astronomical Society.

Ray Golding always had time for colleagues, research fellows and students. He was never too busy to spend time carefully going through theory or discussing the detail of current research with them. Typically, he would set aside his Saturdays at UNSW and spend an hour or more with each student or research fellow in turn discussing progress, current stage of knowledge and future projections.

Following retirement from James Cook in 1996, Ray and wife Inge moved to a semi-rural property at Mooloolah, some 80 km north of Brisbane; *down on the farm* was the way Ray described it. At about this time, Ray was diagnosed with polymyositis, a rare degenerative muscular problem that affected his legs in particular. That hampered his movements to some extent but it did not stop him from cutting 2.5 Ha of lawn and generally tending to the *farm*, for some 12 years of retirement.

Ray is survived by wife Inge, two married daughters Tanya (Sydney) and Elke (Adelaide) and four grandchildren.

Craig Tennant