Appreciation: Warren K. Sinclair, PhD, 1924–2014

This month marks a year since the passing of Warren K. Sinclair, PhD, who was internationally known for achievements in radiation protection, science, and medicine. He died on May 14, 2014. Sinclair was born in Dunedin, New Zealand, and trained in physics at the University of Otago, where he received his bachelor’s and master’s degrees in physics in 1944 and 1945, respectively. In 1946, at only 22 years of age, he became the first hospital physicist in New Zealand, working in Dunedin. In 1948 he went to London (UK) to study with William Valentine Mayneord, DSc, at the Royal Cancer Hospital, receiving a doctorate in physics from the University of London in 1950.

Sinclair became the leader of the radioisotope center of the Royal Cancer (later Marsden) Hospital, where, in collaboration with colleagues from around the world, he developed a number of innovative techniques for radiotherapy with newly available radioisotopes. In 1954, he became head of the Physics Department at the M.D. Anderson Hospital (Houston, TX), where he oversaw installation of the world’s first $^{60}$Co teletherapy unit (2,000 curies) and 1 of the first 4 betatrons. Working with Gilbert Fletcher, MD, and recognizing the increasing importance of standardized calibration and dosimetry techniques, Sinclair performed the first measurement comparisons between the M.D. Anderson betatron units and those in New York, Chicago, and St. Louis. He also expanded on a lifetime interest in the biologic effects of radiation. Working with the National Cancer Institute (NCI) Sinclair looked for mechanisms and techniques for standardizing calibration and assessing dose.

In a tribute to Sinclair, the National Council on Radiation Protection & Measurements (NCRP) noted: “It was Warren Sinclair’s work and his influence at NCI that . . . made dosimetry in radiotherapy essentially uniform nationwide and, indeed, through the international intercomparisons with the National Bureau of Standards, worldwide.”

Sinclair became a senior biophysicist at the Argonne National Laboratory (IL) in 1960, and he served in a number of leadership roles until 1983. During this period he was also a professor of radiation biology at the University of Chicago and later an emeritus professor. Sinclair was the second president of the NCRP, assuming the position in 1977 and refocusing the efforts of the agency on enhancing understanding of the scientific basis of radiation protection and integration of this knowledge into clinical practice. He served in senior advisory capacities to a number of government and scientific organizations, including as chair of the National Academy of Sciences’ Board of Radiation Effects Research.

Sinclair published more than 200 scientific papers and, through his efforts, some of the most influential consensus reports on radiation effects in the 20th century were issued. He served as president of the Radiation Research Society and the American Association of Physicists in Medicine, of which he was a founder.

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original research in the field of molecular imaging and therapy.

Wolf continued his research on nuclear pharmaceuticals until his death, finding ways to assess drug distribution using patient-friendly measures. Until his passing, he also chaired the university-wide Multidisciplinary Advisory Committee on Noninvasive Imaging Studies and the Biomedical Imaging Science Initiative.

Wolf’s wife of 53 years, Gladys, died in 2008. He is survived by 3 children. At his memorial service at USC on February 5, John Yuen, PharmD, a nuclear pharmacist who studied under Wolf and now directs the Radiopharmacy Service at LAC + USC Medical Center, said, “Dr. Wolf was my inspiration—the exemplary scientist and an enlightened friend and mentor. I often remember Walter’s famous adage, ‘What has been done is interesting. What remains to be done is exciting.’”

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J Nucl Med. 2015;56:18N.