

IOMP AWARDS

COLIN G. ORTON AWARDED THE MARIE SKLODOWSKA-CURIE AWARD OF IOMP, 2015



The Marie Sklodowska-Curie Award is one of the highest awards given by the International Organization for Medical Physics. It was established to honour scientists who have distinguished themselves by their contributions to education and training, advancement of medical physics knowledge based upon independent original research and/or advancement of the medical physics profession.

Colin Orton is the sixth recipient of this prestigious award which is only given every three years. Colin Orton worked at St. Bartholomew's Hospital Medical College, London University on his M.Sc. and Ph.D. degrees under the guidance of Professor Joseph Rotblat. In 1961 he was given the title Instructor and taught physics to premedical students and radiation oncologists studying for their Boards. This involvement in teaching was going to characterise Colin's whole career. It was during this period that he worked with many great medical physicists early in their careers, including Jack Fowler, Don Herbert, Chris Marshall, and Vernon Smith, to name a few.

In 1966 at a British Institute of Radiology meeting in London he met Dr. Milton Friedman who offered him a Chief Physicist/Assistant Professor position in his Radiation Oncology Department at NYU Medical Center, where he stayed until 1975. On his 1st day at work, the radiobiologist in the department came to his office and asked him if he'd be willing to teach radiobiology to the

residents because he preferred to be in the lab and didn't like to "waste time" teaching. This led to Colin Orton's lifelong research interest in biological aspects of radiotherapy, especially time/dose relationships. He edited the *Quarterly Bulletin* of the American Association of Physicists in Medicine (AAPM) and initiated a series of "Mind Benders". One of them involved solving a relatively simple Nominal Standard Dose (NSD) problem, which he also sent to about 30 experts worldwide who had written papers using the NSD equation. Over 50% of the responders submitted the wrong answer, including the originator of the NSD concept himself, Dr. Frank Ellis (although he did send a telegram stating that he was very embarrassed and correcting his answer). This led Dr. Orton to simplify the NSD by introducing the Time Dose Factor (TDF) which made practical radiobiology accessible to many in particular after Dr. Eric Hall included the TDF tables into his now famous radiobiology text book. In return for producing these tables for the book, Dr Hall introduced Dr. Orton to Frank Ellis in the lobby of the Palmer House in Chicago during the AAPM Annual meeting a few weeks later. Drs. Orton and Ellis then sat in the lobby for several hours and wrote the 1st draft of the first of several papers on the TDF concept.

Based on this radiobiology work and the understanding of the underlying principles, Colin Orton developed and promoted the use of high dose rate brachytherapy with fractionation schemes to make it safe and effective.

After working as Chief Physicist and Associate Professor of Radiation Medicine at Rhode Island Hospital, Brown University, Providence, RI Colin was recruited as Chief Physicist/Professor at the Radiation Oncology Center/Wayne State University, Detroit, where he stayed until his retirement in 2003. Here he was part of the team that developed the world's first superconducting cyclotron for use in neutron therapy.

Also during his time in Detroit Colin Orton was elected President of the AAPM and, later, Chairman of the American College of Medical Physicists (ACMP) and, later still, President of the American Brachytherapy

Society (ABS). At Wayne State he directed the first ever CAMPEP-accredited medical physics graduate program for over 20 years, with close to 200 M.S. and Ph.D. graduates. It was during the mid-1980s that Larry Lanzl, then President of the IOMP, involved him in IOMP activities, first as the Editor of the new *Medical Physics World*, and later as Secretary-General. While SG of the IOMP he established the Libraries for Developing Countries program. This culminated in his being elected IOMP President and later President of the IUPESM.

In the late 1990s Dr. Orton was appointed Editor of *Medical Physics*, a position he held for eight years, after which he continued his involvement with the journal as the Moderator of the Point/Counterpoint series, which he had initiated in 1998. Although Dr. Orton officially “retired” in 2003, he continued to remain academically active running the Point/Counterpoints, teaching courses and most recently leading the newly established

International Medical Physics Certification Board as president.

During his career Dr. Orton has delivered over 500 presentation world-wide, published over 250 papers (many of them cited more than 100 times), 50 book chapters, and 19 books, and has received numerous honors including the AAPM Coolidge Award, the ACMP Marvin M. D. Williams Award, the Ulrich Henschke Award of the American Brachytherapy Society, fellowship of IOMP and the IUPESM Award of Merit.

Congratulations on behalf of IOMP Executive Committee:

Dr Tomas Kron, PhD
Chair IOMP Awards and Honours Com
Peter MacCallum Cancer Centre, Melbourne, Australia