
**Memorial Resolution of the Faculty of the University of Wisconsin-Madison
On the Death of Professor Emeritus John “Jack” Fowler**

Jack Fowler, emeritus professor of human oncology and medical physics, died Dec. 1, 2016 at his home in London. He was 91.

Professor Fowler served a joint appointment at the University of Wisconsin School of Medicine and Public Health from 1988 until 1994 and from 1999 until 2003.

Fowler is considered one of the founders of modern radiation biology. Much of his work helped bridge the gap between radiation biology and the radiation oncology clinic. By mathematically modeling how radiation interacts with tissue, he advanced the concept of dose fractionation—dividing radiation therapy doses into several smaller doses to maximize therapeutic effects and minimize side effects.

He defined the “biologically effective dose,” which has become the standard method for predicting the biological effect of radiation when the dose-rate and dose-per-fraction rate are altered.

Fowler’s role at the UWSMPH was that of a scientific adviser, energizing and inspiring colleagues. He helped the Department of Human Oncology earn its first Program Project (P01) Grant for research on cellular proliferation and radiosensitivity. He collaborated and published with many UW clinicians and physicists, including Dolores Buchler, Judith Stitt, Daniel Petereit, Bruce Thomadson, Thomas “Rock” Mackie, Timothy Kinsella, Mark Ritter, Paul Harari, Bhudatt Paliwal, Richard Chappell, Mary Lindstrom, Minesh Mehta, Wolfgang Tome and others.

He also applied his dose escalation expertise to the clinical application of TomoTherapy, a radiotherapy system that delivers precise doses of radiation to tumors while allowing physicians to monitor treatment with a built-in CT scanner.

His dose fractionation work helped establish the UW as a leader in brachytherapy—a technically demanding but highly effective treatment modality in which radioactive sources are inserted directly into or placed near to maximize tumor dose while minimizing normal tissue dose.

After receiving his PhD in radiation physics from the University of London in 1955, Fowler spent several years in hospital physics. In 1959, he joined the MRC Radiotherapeutic Research Unit at Hammersmith Hospital (U.K.), where he later served as a professor of medical physics.

Immediately before coming to UW–Madison, Fowler served for nearly 20 years as the director of the famed Gray Laboratory (U.K.). While there, he guided and influenced the work of many of the world’s leading radiobiologists and radiation oncologists.

During his long career, Fowler published more than 550 peer-reviewed papers and dozens of book chapters and delivered hundreds of lectures and presentations. He received more than 30 honors and marks of distinction, including the Rontgen Prize of the British Institute of Radiology, Breur Medal of the European Society for Radiotherapy and Oncology, Juan del Regato Gold Medal, Gold Medal of the Gilbert Fletcher Society, Gold Medal of the American Society for Radiation Oncology and the Radiation Research Society Failla Award.

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When Fowler retired in 2003, the Department of Human Oncology established the Jack Fowler Professorship. Current Chairman of the Department of Human Oncology, Dr. Paul M Harari, holds this Professorship and continues to foster the vision of Jack Fowler in the practice of radiation oncology.

In addition to his academic pursuits, Fowler always found time for other interests. He loved reading, theater, sports, dancing, wine and beer tasting, historic museums, and points of interest. Professor Fowler is survived by his wife Anna and seven children from his previous marriage and numerous grandchildren and great-grandchildren.

Memorial Resolution Committee
Bhudatt Paliwal
Mark Ritter