

Dale Recognized with Loevinger–Berman Award

George Sgouros, PhD, SNMMI Medical Internal Radiation Dose Committee

The 2015 Loevinger–Berman Award for Excellence in internal dosimetry was presented to Roger G. Dale, PhD, by George Sgouros, PhD, on behalf of the SNMMI Medical Internal Radiation Dose (MIRD) Committee, on June 9 at the Annual Meeting of the society in Baltimore, MD. The award was established in 1999 by the SNM Awards Committee in honor of Robert Loevinger, PhD, and Mones Berman, PhD, 2 of the originators of the MIRD schema for internal dose calculations. This award recognizes excellence in the field of internal radiation dosimetry as it relates to nuclear medicine through research and/or development, significant publication contributions, and/or advancement of the understanding of internal dosimetry in relation to risk and therapeutic efficacy.

Dale's contributions are in the area of radiobiology. Increased interest in radiopharmaceutical therapy and theranostics has highlighted the importance of dosimetry that applies to radiopharmaceutical therapy. In the context of therapy, toxicity and efficacy endpoints require that absorbed dose be translated to biologic effect. Dose-versus-response observations in external-beam radiotherapy cannot be directly applied to radiopharmaceutical therapy, because dose delivery in radiopharmaceutical therapy occurs over a greater time period and with a different temporal pattern (exponentially decaying as compared with short bursts). Dale's work on radiobiological modeling has provided the mathematical tools to make this adjustment (1–5). By converting absorbed dose to a biologically effective dose, application of this formalism has helped better predict renal toxicity (6–8). In radiopeptide and, more recently, small molecule targeted therapy, renal toxicity is the primary concern.

Roger Dale received his PhD in physics from the University of London (UK) in 1980. He became a fellow of the Institute of Physics in 1986 and the Institute of Physics and Engineering in Medicine in 1988. In 1995 he was appointed director of Radiation Physics and Radiobiology at Hammersmith Hospital, NHS Trust (London). In 2005, he became honorary professor of Cancer Radiobiology at the Imperial College, London. He has received numerous awards, including the Röntgen Prize in 1988, honorary fellowship in the Royal College of Radiologists in 2007, and the Distinguished Service Medal from the British Institute of Radiology in 2013.

Previous recipients of the Loevinger–Berman Award were: Roger J. Cloutier (1999), Dandamudi V. Rao, PhD (2000), Keith F. Eckerman, PhD (2001), Sven-Erik Strand, PhD (2002), John W. Poston, Sr., PhD (2003), Roger W. Howell, PhD (2004), James S. Robertson, MD, PhD (2005), Gordon L. Brownell, PhD (2006), Evelyn E. Watson (2007), Harold L. Atkins, MD (2008), Stephen R. Thomas, PhD (2009), Amin I. Kassis, PhD (2010), Kenneth F. Koral, PhD (2011), John L. Humm, PhD (2012), Michael Ljungberg, PhD (2013), and S. James Adelstein, MD, PhD (2014).

About the MIRD Committee

The SNMMI MIRD Committee is tasked to: (1) Develop and provide a standardized framework and methodology for calculation of internal dose quantities in nuclear medicine; (2) Compile, evaluate,

and disseminate data needed to implement standardized internal dosimetry methods, including radionuclide decay properties and emissions, energy absorbed fractions, and anatomic models; (3) Collect and assess experimental and peer-reviewed data to publish dose estimate reports for

selected new radiopharmaceuticals that significantly impact the current practice of nuclear medicine; (4) Provide peer-reviewed evaluations of proposed new dosimetry models and methods, including correlating dose with biological response for cellular, animal, and clinical trials data; (5) Address other critical and timely dosimetry issues that may impact the current practice of nuclear medicine; (6) Develop, test, and publish software and Internet tools that implement MIRD calculation models and techniques, including dose–response data and biological effective or equivalent dose quantities; and (7) Actively work with other national and international committees through joint meetings and symposia to establish uniformity in dosimetry models, techniques, named special quantities, and units of dose and biological response. In addition to regularly publishing pamphlets and reports on various internal dosimetry topics, the MIRD Committee also sponsors regular sessions at the SNMMI Annual Meeting, including continuing education offerings.



Roger G. Dale, PhD (left), receives Loevinger–Berman Award from George Sgouros, PhD (right).

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