



Matthew A. Coleman, Ph.D.

Clinical Interests

Dr. Coleman is pursuing research to identify the cellular mechanisms associated with ionizing radiation (IR) exposures. This work relies on using genomic and proteomic techniques to identify and characterize transcriptional networks, such as TP53, MYC and NF- κ B, that play a role in controlling cell fate in response to IR exposures. Importantly, these regulatory pathways are also utilized by the cell for cancer progression. Such information can be utilized for developing diagnostic assays and tools for biodosimetry as well as the treatment and prevention of cancer. Dr. Coleman is also very active in the development of advance biochemical techniques using nanoparticles made of apolipoproteins and phospholipids called nanolipoprotein particles (NLPs). NLPs closely mimic the cellular membrane bilayer, and represent an ideal platform for characterizing membrane proteins involved in signal transduction. For example, NLPs are proving useful for the characterization of the structure and function of G-protein coupled protein receptors. NLPs are also proving useful for drug delivery, immuno-modulation and in vivo imaging in the treatment of cancer.

Title Adjunct Professor

Specialty [Cancer](#)

Department [Radiation Oncology](#)

Division Radiation Oncology

Center/Program Affiliation [UC Davis Comprehensive Cancer Center](#)

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Education Ph.D., Boston University, Boston, Massachusetts, 1997
B.S., University of Massachusetts, Boston, Massachusetts, 1987

Professional Memberships American Chemical Society
Environmental Mutagen Society
Protein Society (FASEB)
Radiation Research Society

Honors and Awards Nanotechnology 50 award recipient, 2008
NIH scientific achievement award, Radiation Oncology Gordon Conference, 2005
Merck travel award, Radiation Oncology Gordon Conference, 2005



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Select Recent Publications

Research & Development 100 award recipient for "Gene Microdissection", 2001

Stein Moore Graduate Student Award, Protein Society, 1996

Travel Award. Biology Department, Boston University, 1994

Coleman MA, Escobar PA, Mahadevan B. Omics-current applications in toxicology. *Mutat Res.* 2011 Jun 17;722(2):93. Epub 2011 Feb 17.

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