Non-targeted Effects and LET: Considerations for Earth and Space Research

Marianne B. Sowa Space Biosciences Research Branch, NASA Ames Research Center, Moffett Field, CA 94035

It is evident from reports in the literature that there are many confounding factors that are capable of modulating radiation-induced non-targeted responses such as the bystander effect and the adaptive response. It has even been suggested that the observation of non-targeted responses may not be universally observable for differing radiation qualities. Dr. William Morgan made many contributions to the study of radiation induced non-targeted effects and it is indeed this area of research where we first began our collaboration more than a decade ago. In this presentation, I will discuss elements of this journey together with a particular emphasis on the role of LET in non-targeted effects.