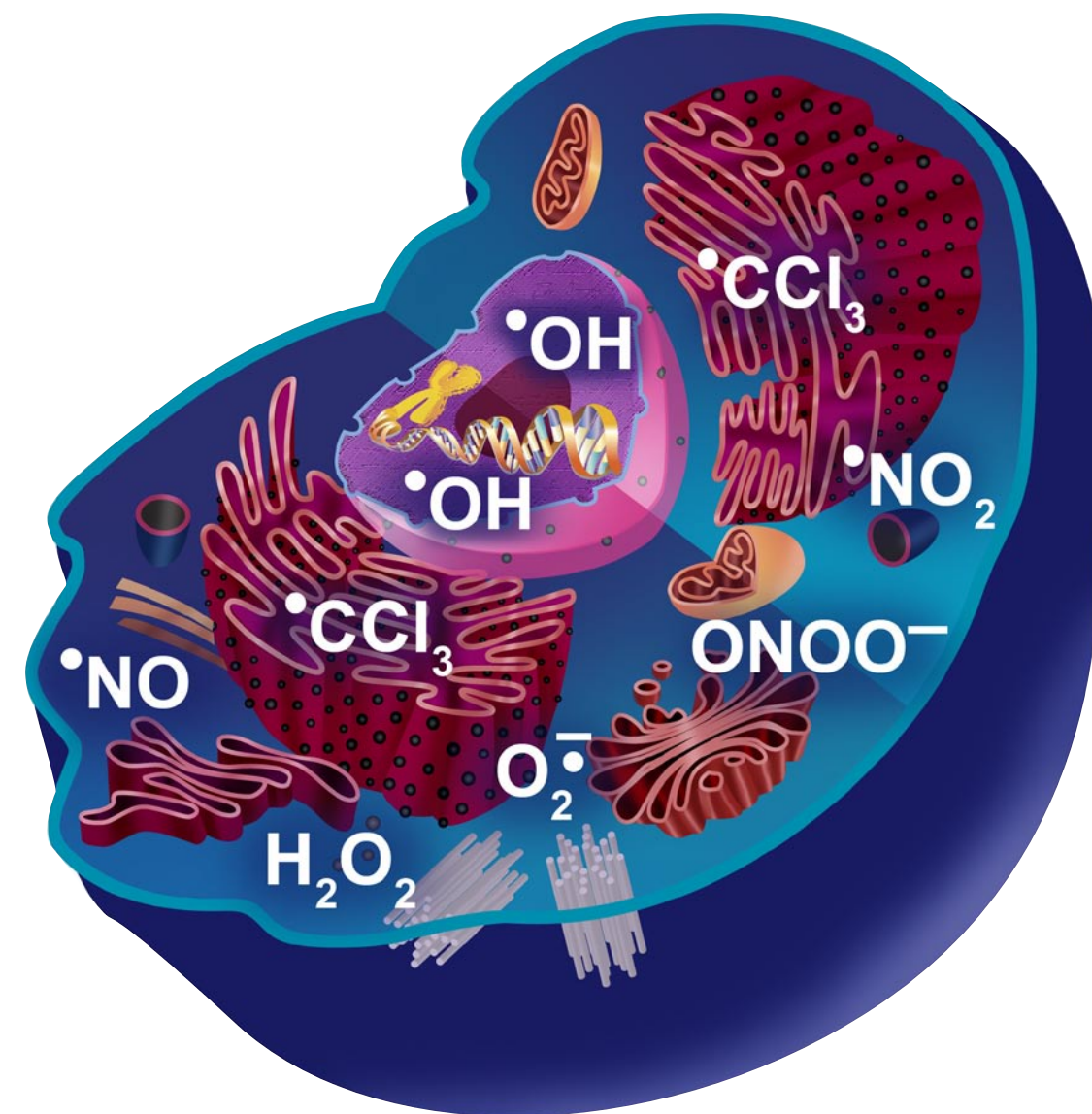




Principal Investigator for the Free Radical Metabolites Group within the Laboratory of Pharmacology and Chemistry, National Institute of Environmental Health Sciences.



Under conditions of inflammation and oxidative stress all cellular biomolecules are potential targets for reactive species (H_2O_2 , ONOO^-) and free radical metabolites ($\cdot\text{OH}$, $\cdot\text{NO}_2$, $\cdot\text{CCl}_3$, etc). Free radical oxidative damage to cell lipids, proteins and DNA may lead to toxicity and disease.

Ronald Mason, Ph.D.

Addresses the question: "What role do free radicals have in toxicology, biochemistry, and medicine?" and explores fundamental questions of oxidative damage caused by environmental agents. Pioneered and developed the use of electron spin resonance spin-trapping techniques in molecular studies of biological systems with particular emphasis on their applications to the field of toxicology and environmental sciences. Development of this difficult but most important area has been key to the wide acceptance of the existence of free radical metabolites in vivo. Invented a new immuno-spin trapping technology for detection of free radical intermediates. The development of an immunoassay for the nitrono adducts of protein radicals brings all the power of immunological techniques to bear on free radical biology and medicine.

Received the NIEHS Scientist of the Year Award in 2006.



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