

XIII JCET LECTURE, 01.02.2013, 9.00:

Past, Present, and Future of the Amazing Molecule Nitric Oxide and its Biomedical Importance: A Personal Perspective

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A historical overview of the discovery of NO and its importance in the development of Chemistry and its more recent importance in Human physiology/pathophysiology, including the awarding of the 1998 Nobel Prize for Physiology or Medicine to Robert Furchgott, Louis Ignarro, and Ferid Murad. I will also provide a brief summary of some of our recent work on interactions of NO with cellular iron and its involvement in signaling, reactive oxygen species, and death.

CURRICULUM VITAE

Dr. Lancaster received his B.Sc. in Chemistry and Ph.D. in Biochemistry from the University of Tennessee. After postdoctoral work at Cornell and Duke Universities, he was appointed to the Department of Chemistry and Biochemistry Utah State University. He subsequently assumed positions in the Department of Surgery University of Pittsburgh, Department of Physiology Louisiana State University Health Sciences Center at New Orleans, and the Department of Anesthesiology and the Center for Free Radical Biology at the University of Alabama Birmingham where he is presently.

Dr. Lancaster's research interests are broadly defined as delineating the basic chemical and physical mechanisms of cellular electron transport, bioenergetics, and reactive nitrogen and oxygen species, with a major focus on nitric oxide.

He is the author or coauthor on over 150 publications including three books. **He is the recipient of numerous grants and awards**, including an Established Investigatorship Award of the American Heart Association; Bronze Prize of Excellence awarded by the Society of National Association Publications for "Nitric Oxide in Cells", American Scientist 1992;80:248-259; Distinguished Speaker and Honors Lecturer, University of Tennessee Martin; First Recipient of the William A. Lell, M.D./Paul N. Samuelson, M.D. Endowed Chair, Department of Anesthesiology, University of Alabama Birmingham; First Recipient of the Lancaster Award of the biannual Nitric Oxide Gordon Research Conference, 2006; The Iron Bolt Award of the Gordon Research Conference on Oxygen Radicals 2010. He was Organizer of the First Gordon Research Conference on Nitric Oxide; Founder of the Nitric Oxide web page 1995; Co-founder (along with Louis Ignarro) of the Nitric Oxide Society and its journal, Nitric Oxide Biology and Chemistry, 1996; Vice President and President of the Nitric Oxide Society 1998-2000; Associate Editor and Editor-In-Chief of Nitric Oxide Biology and Chemistry 2000-2011.