BABE-2013

OMICS Group Conferences
Accelerating Scientific Discovery

4th World Congress on
Bioavailability and Bioequivalence:
Pharmaceutical R & D Summit

May 20-22, 2013 DoubleTree by Hilton Beijing, China

Nitric oxide can convert into nitrogen in blood

Tao Li

China Three Gorges University, China

Abstract

Nitric oxide is an important cellular signaling molecule. Nitroglycerin tablets can convert into nitric oxide in body. L-Ascorbic acid acts as an antioxidant. Can nitric oxide react with L-Ascorbic acid in the body? Several persons took 100 mg L-ascorbic acid and sublingual 0.5 mg nitroglycerin tablets half an hour later. The content of nitrogen gas in the venous blood was detected by GC-ms with the helium gas as carrier gas. In the control experiment, L-ascorbic acid was not taken. The blood pressure of persons who took the ascorbic acid was slightly statistically higher than that at ordinary time, whereas the blood pressure was statistically lower in the control experiment. It means that there is no enough nitric oxide in the blood of persons who took the ascorbic acid. The content of nitrogen gas in the blood was slightly statistically higher than that in the control group. I think that nitric oxidecan convert into nitrogen gas in blood. 2NO + 2C6H8O6 = N2 + 2H2O + 2C6H6O6. The value of Gibbs' s free energy (-582 kJmol-1) in this reaction is large negative and the equilibrium constant (1.00*10102) is >>1, corresponds to a thermodynamically favourable reaction and virtually goes to completion. It is useful to understand the reductive mechanisms of the inactivation of NO. It is a part of the global recycle of nitrogen.

Biography

Tao Li has completed his Ph.D. at the age of 32 years from Zhongshan University and postdoctoral studies from Huazhong University of Science and Technology, China. He has published more than 10 papers in reputed journals.