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**NON-ENZYMATIC NITRIC OXIDE SYNTHESIS PEROXIDE INDUCED BY ULTRASOUND MEDIATED MICROBUBBLES**

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Li Peng, Wang Yuexi. *Affiliated Hospital of Inner Mongolia Medical College of Department of Cardiology*

**Objectives** Whether ultrasound mediated microbubbles could enhance the product by non-enzymatic pathway will be discussed in this chapter.

**Methods** Mix Laevo-arginine (L-Arg) with hydrogen peroxide ( $H_2O_2$ ) by the concentration rates 1:1, 10:1, 10:0.1, 1:10, irradiates with ultrasound for 60 s. (frequency: 1MHz, output power: 0.5, 1, 1.5 W/cm<sup>2</sup>), and test the formation of nitric oxide (NO).

**Results** The experimental group generates the most NO of all groups, ultrasound group was better than micro bubbles group and blank control group, microbubbles group and blank control are normal. Besides, NO product has positive relation with output power in local range.

**Conclusions** Ultrasound mediated microbubbles could enhance NO product by non-enzymatic pathway.