

Commentary

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## Intercellular communication, NO and the biology of Chinese medicine

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### Abstract

New multiple categories of health disciplines have become popular in the west and integration between the medicinal approaches has become essential.

The hypothesis presented here suggests a novel integrative view that combines Western biochemistry with the Chinese medicinal concept of qi.

The core for this hypothesis is that transmission of qi along the meridians is based on informational molecules that travel *via* an intercellular communication system. Acupuncture at specific points enhances the flow of the signaling molecules through this communication system.

Nitric oxide is suggested as a prime candidate for such a signaling molecule in the meridian system. The biochemistry of nitric oxide can shed light on the biology underlying Chinese medicine while Chinese medicinal data can provide a clue to the sought after framework for nitric oxide.

### Introduction

Recently there has been a great fervor in the health field around the inclusions of non-traditional disciplines [1]. For example, eastern medicines, naturopathy and healing have become popular and were recently introduced into medical school curricula. These changes have made Chinese medicine [2,3] attainable in the west just as Western medicine is to the east. However, open-mindedness [4,5] or legality [6,7] does not necessarily imply true integration between the medicinal approaches.

The aim of this article is to suggest a novel integrative view of the key concept in Chinese medicine, qi, meridians and acupuncture, with Western biochemistry. The crux of the hypothesis is that the transmission of qi along the meridians, involves informational molecules, which travel *via*

an intercellular communication system, and, acupuncture at specific points enhances this communication system.

Nitric oxide (NO) is proposed here as a prime candidate for such a signaling molecule in the meridian system.

One analogy that can be made is to consider the word HELLO as an example to the signaling molecule. The information that HELLO transfers is not only the meaning of the word, which is HI, but mainly the way by which it is expressed e.g., loud, smiling, sad, laughing. If we think of NO in the context of a word like HELLO, it is suggested that the meaning of qi is not only a word like HI but rather an abundance of bodily information.