LETTER to the EDITOR

Morinda citrifolia Plays a Central Role in the Primary Prevention of Mitochondrial-dependent Degenerative Disorders

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Dear Editor

We find the article by Gupta et al. (2013) fascinating and consistent with our pre-clinical research. *Morinda citrifolia*, also known as Indian Mulberry (or Noni) is a plant belonging to the family Rubiaceae. A number of major chemical compounds have been identified in the leaves, roots, and fruits of Noni plant. The preventive effects of *Morinda citrifolia* are evidenced in several disorders, such as cancer (Wang, 2001; Pandi et al., 2010; Gupta et al., 2013), diabetes (Lee et al., 2012) and neuronal disorders (Harada et al., 2009), but the action mechanisms are up to now unknown.

We investigated the effects of Noni juice with the aid of Quantum Biohpysical Semeiotics (QBS) in seven healthy subjects. Through the method of Auscultatory Percussion of the stomach, QBS can assess the nonlinear dynamics of biological systems and evaluate several quantitative-qualitative parameters: latency and duration times (seconds) and intensity (cm) of different gastric reflexes (Caramel, 2014). These numerical values methodology are useful for diagnostics and therapeutic monitoring.

In our study we observed the latency time (Lt) of seven individuals after the assumption of 40 ml of Noni juice, 3 times per day, for 5 weeks. In all the examined subjects the Lt of cardio-gastric aspecific reflex increased from Lt = 8 to Lt = 48, a six-fold increase if compared to the baseline value. We never observed such an excellent improvement of Lt: all other therapeutic treatments (individually or in combination) monitored so far throughout QBS tests could only increase the Lt of the cardio-gastric aspecific reflex from 8 up to 24 sec at best.

QBS tests, by evaluating both parenchymal and microcirculatory parameters, confirm the already well known anti-oxidant properties of Noni fruit and other peculiar properties such as (a) diminishing/normalizing the tissue acidosis, (b) re-equilibrating the acid-basic balance, (c) ameliorating/normalizing the mitochondrial redox activity as well as the tissue oxygenation, the microcirculatory flow motion and the metabolism as a whole.

Our findings encourage further clinical investigations of Noni fruit on a larger scale for the primary prevention of mitochondrial-dependent degenerative disorders such as cancer (Stagnaro and Caramel, 2013a) type 2 diabetes mellitus (Stagnaro and Caramel, 2013b), coronary artery disease (Stagnaro and Caramel, 2013c), and neurodegenerative pathologies like Alzheimer's Disease (Marchionni et al., 2014).

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