

EDITORIAL

Radical radical everywhere, where is the perfect antioxidant?



Free radicals are associated directly or indirectly with most of the pathologies known to date. However approaches of using antioxidants to prevent these pathological events although promising in the several preclinical studies haven't been convincing in the clinical scenario. So where does this take us in hypothesizing the role of free radicals in disease? Either their overall role in the disease initiation or progress is insignificant; hence interfering with them doesn't results in promising outcome. On the other hand they may have very specific and selective (very precisely regulated) role, which are yet to be unrevealed and hence the very approach of using a broad-spectrum antioxidant is wrong. Considering the fact that reactive oxygen species (free radicals) are also involved in several physiological regulations the second hypothesis appears acceptable. Hence understanding the specific and selective role of free radicals in physiology and pathophysiological events is necessary in addition to identifying the biological source of these radicals. While the basic biologists do their part in deciphering these events the drug discoverers/developers are occupied in finding molecules which can interfere with these events.

As a first step towards these discoveries, the Mother Nature has gifted us with several natural products with potential antioxidant activities. In the current issue, Arora and Rawat, report anti-inflammatory effects of flavones fraction (which possess anti-oxidant effects) of *Tylophora indica*. Singh *et al.*, report anti-inflammatory effects of *Rhododendron dauricum* L. by suppressing TNF α (reported to be involved in oxidative stress generation) up-regulation. Free radicals are also involved in aging associated neuro-degeneration, in the current issue Mahesh *et al.*, report antioxidant potential of *Terminalia Chebula* have beneficial effects in aging associated decline in brain neurons. "Food for thought" when brain is in the mesh of free radical can the stomach be faraway? Also reported in this issue are gastroprotective effects of antioxidants from *Anisomeles indica* and *Lippia nodiflora* (Dharmasiri *et al.*, and Khalil *et al.*).

Where does this lead us? Definitely towards further dissecting and understating of the specific and selective pathways involved in the free radical patho-physiology and in deciphering the selective modulators. My best wishes to all the scientific communities involved in this area of research in leading us to seeing the light at the end of the tunnel.

Sincerely

Arun Kumar HS

Dr. ARUN KUMAR H. S. is Senior Scientist at Dept. of Cardiovascular Sciences, Bioscience Institute, University College Cork, Cork, Ireland