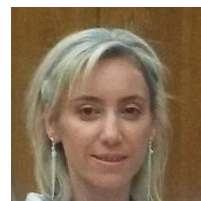


Antioxidants against Oxidative Stress in Neurodegenerative Diseases

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Abstract

Chemical toxic pollutants (especially heavy metals) are important sources of reactive oxygen species (ROS) in biological systems. Membrane phospholipids of aerobic organisms are continually subjected to oxidant challenges from endogenous and exogenous sources, while peroxidized membranes and lipid peroxidation products represent constant threats to aerobic cells. The primary antioxidant protection against free radical and ROS is provided by the enzymes glutathione peroxidase (GSH-Px), superoxide dismutase (SOD) and catalase (CAT), respectively. The trace element selenium has been implicated in chemo-prevention and drug-resistance through reduction of oxidative stress. Selenium could prevent damage to the unsaturated fatty acid of subcellular membranes by lipid peroxidation induced by free radicals.

Flavones and flavonoids are known to have potent antioxidant activity due to intracellular free radical scavenging capacities. Flavonoids are found ubiquitously in plants as a member of polyphenolic compounds which share diverse chemical structure and properties. Quercetin is among the most efficient antioxidants of the flavonoids. The antioxidant property of quercetin has been highlighted in this review. These compounds have pivotal role in treatment of diabetes, cancers and some cardiovascular and Neurodegenerative diseases.

Speaker Publications:

1. "Antioxidant Potential of Hypericum spectabile JAUB. ET SPACH"
2. "Antioxidant, antimicrobial and neuroprotective effects of Octaviana asterosperma in vitro"
3. "Phycion and Phycion 8-O-β-D-glucopyranoside: Natural Anthraquinones with Potential Anti-cancer Activities"
4. "The investigation of antioxidant and anti-inflammatory potentials of apitherapeutic agents on heart tissues in nitric oxide synthase inhibited rats via Nω-nitro-L-arginine methyl ester"

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Biography:

Zeliha Selamoglu is a Professor in Medical Biology department of Nigde Ömer Halisdemir University, Turkey. She earned her PhD in Biology from Inonu University, She has published over 150 peer reviewed journal articles with over 1150 citations and many technical reports. She is a member of Society for Experimental Biology and Medicine: Associate Membership and European association for cancer research. She has served as Editorial Board member for many Journals.