Oxygen Free Radicals and Their Biomedical Implications: A Mini Review
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Source: MINI-REVIEWS IN ORGANIC CHEMISTRY Volume: 8 Issue: 4 Pages: 372-376 Published: NOV 2011
Times Cited: 0 (from Web of Science)
Cited References: 80 [view related records] Citation Map

Abstract: Free radicals (FR) are chemical species of significant importance to biological systems. FRs are generated by endo-as well as exogenous factors. Biological systems are equipped with appropriate metabolic pathways to remove cellular FR as well as repair the damages caused by them. Their cellular/physiological load profoundly influences the metabolism, physiology and overall well being of biological systems. Therefore, they are implicated in cellular degenerative processes and in patho-physiology, including carcinogenesis and ageing. The review shall attempt to give a generalized overview of FR chemistry, especially to the biologically important oxygen free radicals (OFR) and reactive oxygen species (ROS). The review shall also discus the OFR/ROS biology to get an overview of the induced damage at molecular, cellular and organismal levels in order to give a perspective of their influences on the genomic integrity, cellular microenvironment and physiology with special reference to human health.

Accession Number: WOS:000298495000004
Document Type: Review
Language: English
Author Keywords: Free radicals; Reactive oxygen species; DNA; Cellular and molecular damage; Diseases
KeyWords Plus: MITOCHONDRIAL-DNA DAMAGE; REACTIVE OXYGEN; OXIDATIVE STRESS; HYDROGEN-PEROXIDE; HUMAN-DISEASE; NITRIC-OXIDE; SIGNAL-TRANSDUCTION; PROTEIN OXIDATION; ESCHERICHIA-COLI; AMINO-ACIDS
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Publisher: BENTHAM SCIENCE PUBL LTD, EXECUTIVE STE Y26, PO BOX 7917, SAIF ZONE, 1200 BR SHARJAH, U ARAB EMIRATES
Web of Science Categories: Chemistry, Organic
Research Areas: Chemistry
IDS Number: 868AD
ISSN: 1570-193X