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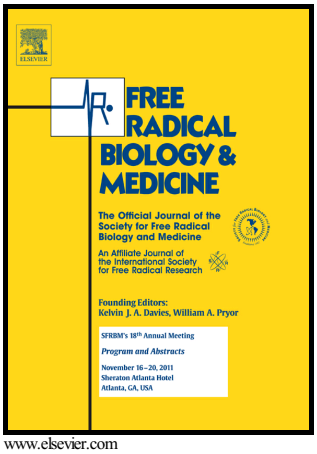

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Enhanced plasma protein carbonylation in patients with myelodysplastic syndromes

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Abstract

Myelodysplastic syndromes (MDS) represent a heterogeneous group of pre-leukemic disorders, characterized by ineffective hematopoiesis and the abnormal blood cell development of one or more lineages. Oxidative stress, as an important factor in the carcinogenesis of onco-hematological diseases, is also one of the known factors involved in the pathogenesis of MDS. An increase of reactive oxygen species (ROS) may lead to the oxidation of DNA, lipids, and proteins, thereby causing cell damage. Protein carbonylation caused by ROS is defined as an irreversible post-translational oxidative modification of amino acid side chains, and could play an important role in signaling processes. The detection of protein carbonyl groups is a specific useful marker of oxidative stress.

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