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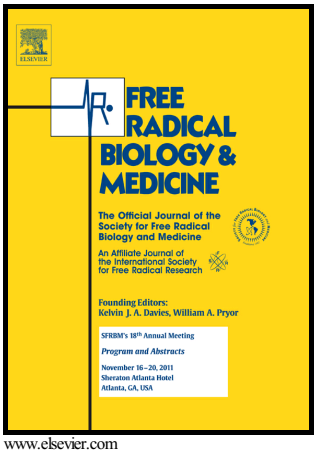

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A certain role of SOD/CAT imbalance in pathogenesis of autism spectrum disorders

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ABSTRACT

The real impact of reactive oxygen species, antioxidant enzymes, mitochondrial dysfunction and chronic inflammation on the development of autism spectrum disorders (ASD) remains unclear, and even controversial. In this study we compared the plasma levels of antioxidant enzymes and their cofactors, markers of oxidative damage, and the respiratory burst in peripheral blood polymorphonuclear leukocytes (PMNL) as surrogate marker of chronic inflammation obtained from 10 children (4-10 year old) who met DSM-5 criteria and their siblings. We demonstrated diminished superoxide dismutase (SOD) and enhanced catalase (CAT) activities resulting in a