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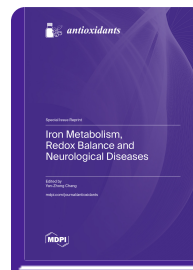
## **Iron Metabolism, Redox Balance and Neurological Diseases**

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With the aging of the population, the incidence rate and number of elderly nervous system diseases have increased sharply. This event has brought huge problems to society. Despite significant efforts being made to explore new treatment options and drugs, the results have been limited. The reason may be due to people's incomplete understanding of the pathogenesis of these age-related diseases. Iron is the most abundant trace element in the human body and is essential for normal life activities. Previous studies have shown that brain iron levels increase with age. The abnormal increase in brain iron levels is closely related to age-related neurological diseases. The disruption of the redox balance may be an important mechanism for the occurrence of neurological diseases caused by brain iron abnormalities. This Special Issue mainly highlights and discusses the latest research progress related to the regulation of brain iron metabolism, redox balance, and the pathogenesis of neurological diseases, such as Alzheimer's disease (AD), Parkinson's disease (PD), cerebral ischemia, cancer and maintenance of cellular stemness. The molecular mechanisms of iron-misregulation-induced redox imbalance in disease pathogenesis were analyzed. On this basis, further discussions were conducted on potential therapeutic targets for regulating iron metabolism to achieve effective intervention in elderly neurological diseases.



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