

## The effects of silver nanoparticles on Cu/Zn-superoxide dismutase (SOD1) human protein

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Nanotechnology is one of the most promising technologies in the 21st century, and many researches in nanotechnology have been carried out and they greatly contributed to the development of the various field of industry. However, despite its many advantages, some concerns related with its potential impacts on the human health and environment are raised recently. Because their potential negative effects have not yet been completely identified, so clarifying the unidentified effects of the nanomaterials is most important and must be done ahead. In this study, the effects of silver nanoparticles on Cu/Zn-superoxide dismutase human protein related to the neurodegenerative disease were identified. Interaction between silver nanoparticles and human protein was evaluated via surface plasmon resonance spectrometer and AFM. And the growth of protein aggregates by exposure to silver nanoparticles was observed by thioflavin T fluorescence measurement and TEM images. The abnormal formation of protein aggregates can be cause of human disease, so these experimental results can provided the information of the potential impacts of nanomaterials.