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Nanomaterials in the Cholinesterase Biosensors for Inhibitor Determination

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Abstract

Cholinesterase biosensors based on different nanomaterials have been considered and discussed in terms of sensitivity and selectivity of irreversible inhibitor detection. The function and influence of various types of nanoparticles, i.e., carbon nanotubes, metal and metal oxide nanoparticles and polymeric materials are described and the future progress in the development of cholinesterase sensors is discussed. The principal attention is focused on the approaches to the increase of the sensitivity of inhibitor determination and improvement of the biosensor operation.