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## Early identification and efficient therapy of Alzheimer's disease- Nanotechnology as a tool

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We present the role of nanotechnology in the development and improvement of techniques for early diagnosis and effective treatment of Alzheimer's disease (AD). Since AD pathology is almost irreversible and present-day medications for AD only lower its associated symptoms, application of disease-modifying treatments could be successful only if AD early diagnosis is possible. Nanotechnology is advancing molecular detection, drug discovery and delivery and monitoring for a number of human diseases, including neurodegenerative disorders with AD. The recently growing application of nanotechnology, mainly based on the special physical (optical, electrical or magnetic), chemical and biological characteristics of certain multifunctional nanoparticles -is promising for very early diagnosis of AD. According to literature and personal experiences, the authors of this presentation discuss the possibility of nanotechnology for diagnosis and treatment of AD, underlined the role of interdisciplinary research for the early diagnosis and possible cure for AD.

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