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Treatment of Alzheimer disease by using antisense technology

Muhammad Raziuddin Siddiqui

Antisense technology is being used in many areas of biotechnology. This concept depends upon the disruption of protein synthesis at the RNA level. This is done by binding complementary oligonucleotides to the RNA that codes for the specific protein and hence destroying it by using RNA synthetase and RNA-induced silencing complex. Evidence has proven that progressive neurological disorders such as dementia and Alzheimer's are caused by the buildup of abnormal proteins, such as amyloid precursor protein in the brain, which forms plaques around the nerve cells and tangles them. By injecting the specific oligonucleotides complementary to the beta-amyloid precursor protein, the destruction and no further formation of the beta-amyloid protein can be ensured. Hence, no plaques will be formed, and the onset of Alzheimer's can be delayed. This futuristic approach not only has the potential in delaying progressive neurological disorders, but also looks promising for other types of diseases which are concerned with abnormal protein production.

Keywords: Alzheimer, Antisense technology, Oligonucleotides, Dementia, Beta-amyloid precursor protein

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