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Revolutionizing Alzheimer's Care: Emerging Therapeutic Approaches

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Abstract: *This review explores the recent breakthroughs in Alzheimer's disease (AD) research and emerging therapeutic approaches aimed at transforming the management of this debilitating neurodegenerative disorder. As Alzheimer's continues to represent a significant global health challenge, novel therapies targeting the underlying biological mechanisms, such as amyloid plaques, tau tangles, neuroinflammation, and neurodegeneration, are being investigated. Additionally, non-pharmacological interventions and advancements in diagnostic technologies are discussed as complementary strategies in the fight against Alzheimer's disease. This paper provides an overview of the most recent developments in Alzheimer's therapeutics and their potential to revolutionize patient care.Alzheimer's disease (AD) is an aging-related Irreversible neurodegenerative disease affecting mostly the elderly population. The main pathological features of AD are the extracellular Aβ plaques generated by APP cleavage through the amyloidogenic pathway, the intracellular neurofibrillary tangles (NFT) resulting from the hyperphosphorylated tau proteins, and cholinergic neurodegeneration. However, the actual causes of AD are unknown, but several studies suggest hereditary mutations in PSEN1 and -2, APOE4, APP, and the TAU genes are the major perpetrators..*

Keywords: Alzheimer's disease (AD), Neurodegenerative disorder, Amyloid plaques, Tau tangles, Neuroinflammation, Neurodegeneration