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**ALZHEIMER'S DISEASE - A TWENTY-FIRST CENTURY PLAGUE**

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Abstract

Neurodegenerative disorders such as Alzheimer's and Parkinson's diseases arguably represent the greatest challenge to the social fabric and health care systems of much of the modern world. The predominant reason for their rapidly increasing prevalence is the increase in longevity that has resulted from the tremendous advances in public health and hygiene and in medical and surgical interventions over the last century. The most common neurodegenerative disorders are associated with protein misfolding and aggregation, and they therefore differ in nature from most other types of disease and indeed there are at present no cures or even highly effective treatments. Very significant advances have, however, been made recently in our knowledge of the molecular origins of these conditions, and are now beginning to suggest new and rational therapeutic strategies by which to combat their onset and progression. This talk will discuss recent approaches to this end that we are currently exploring within the framework of our growing mechanistic understanding of the fundamental nature of protein misfolding and aggregation.