



THE GLOBAL CHALLENGE OF ALZHEIMER'S DISEASE: SETTING THE RESEARCH COMPASS

by

Howard Feldman

Professor, Department of Neurosciences; Director, Alzheimer's Disease Cooperative Study, University of California, San Diego, La Jolla, CA, USA

With the aging of the world population, there will be unprecedented numbers of persons both at risk and living with dementia. Much of the disease burden will be experienced in low and middle income countries. There has been a significant call to action in the global community to create national plans for care, to set research priorities, and to invest heavily in research in addressing this challenge. There has been strong scientific evidence accruing that there is continuum of disease that starts with a long preclinical silent period followed by symptomatic stages that progress inexorably to severe terminal dementia. It has become increasingly possible to identify the preclinical at risk phase of Alzheimer's disease through CSF biomarkers, and PET imaging where the presence of Alzheimer pathology can be identified before symptomatic onset. The first generation of preclinical AD trials are now taking place with the intention to intervene in the preclinical disease stages. This shift in approach is important as rational therapeutic development targeting amyloid lowering in mild to moderate AD has been uniformly unsuccessful. This has shifted the prevailing amyloid therapeutic hypothesis to either testing in primary or secondary prevention. Other fast moving areas of therapeutic development include, tau directed therapies within the new insights of cellular spread and propagation of disease.

In parallel with this pharmaceutical focused search for treatment, there is also ever increasing interest in lifestyle interventions to delay the onset of dementia. This approach has been modelled to have potentially enormous impact if successful delay of onset of 6 months to 5 years could be realized. Candidate interventions include control of vascular risk factors/stroke prevention, cognitive training, aerobic training and dietary counselling.

With the aspirational goal of finding a cure or prevention of AD by 2025 having been set, and with unprecedented attention on this problem, setting the research compass to achieve progress is critical.



Howard Feldman, MD, FRCP (C) is a Neurologist and Professor of Neurosciences at the University of California, San Diego and Director of the Alzheimer Disease Cooperative Study (ADCS). He holds Affiliate/Adjunct Professor appointments at the University of British Columbia, McGill Center for Studies in Aging and Yale University.

Dr. Feldman has made seminal contributions, with scientific discoveries and clinical research studies focused on aging, mild cognitive impairment/ Alzheimer's disease (AD), front temporal dementia (FTD) and diagnostic/therapeutic trials. He contributed to the discoveries of the progranulin (Nature 2006) and C9ORF72 (Neuron 2011) genetic mutations which cause FTD and FTD with motor neuron disease. He has also contributed to the development of important novel criteria for Alzheimer's disease that re-conceptualize the earliest stages of disease (Lancet Neurology 2007, 2011, 2014). He has lead numerous international clinical trials in AD contributing important new original data, informing care across the continuum of the disease. He has led the NIA funded ADCS since April 2016.

His career contributions have been profiled in Lancet Neurology in 2007, and in 2014 he was named by Thomson Reuters as a 'highly cited' neuroscientist and among 'the world's most influential scientific minds'. He has been appointed as Fellow of the Canadian Academy of Health Sciences and the American Academy of Neurology in 2008. He served as the inaugural Fisher Family and Alzheimer Society of British Columbia Endowed Professorship for Research

in Alzheimer's Disease. From 2009-2011, he took a leave from his academic appointment at UBC, to take on a senior leadership role as therapeutic area head for neuroscience global clinical research at Bristol-Myers Squibb, where his research focused on developing novel pharmaceutical therapies for neurodegenerative and other neurological/psychiatric disorders.

He has also had a career long commitment to clinical care. He has served as the Director UBC Hospital Clinic for Alzheimer's Disease and Related Disorders and works as an active clinician, educator and research scientist.

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Tea will be served following the talk

Centre for Brain Research

An Autonomous Centre of the Indian Institute of Science, Bangalore-560 012

Ph. No. : +91 2293 3588 | E-mail: office.cbr@iisc.ac.in | Web: www.cbr.iisc.ac.in