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Stress-induced alzheimer's disease

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Alzheimer's Disease (AD) is a chronic but deadly neurodegenerative disorder. A significant burden on global public health, a cure for AD is still elusive. Recent clinical trials based on pathogenic theories of extra/intracellular protein aggregation resulting from oxidative stress or other environmental insults have encountered setbacks. Here, we report a significant and serendipitous case of an AD patient. It is the first time to follow a single patient over 32 plus years, where AD symptoms have presented and remised repeatedly. The effects of stress resulting in numerous ailments, e.g. memory loss, brain atrophy, high blood pressure, inflammations, decrease of immunity, etc. were observed in the five episodes of severe stress, indicating that the disease is stress-induced. An anti-stress lifestyle involving seven daily anti-stress methods were implemented, which remarkably led to the recovery of memory and retardation of disease progression. We discovered a relationship between stress/stress hormones and strain/effects of stress hormones and the pathways leading to a stress-induced molecular mechanism that accounts for the toxic free radicals (oxidants) and Aβ and Tau (anti-oxidants). Our mechanism may also be applied to other neurodegenerative diseases related to stress effects on proteins, e.g. alpha-synuclein in Parkinson's disease, superoxide dismutase in amyotrophic lateral sclerosis, IAPP amyloid in type-2 diabetes, etc. As chronic traumatic encephalopathy and post-traumatic stress disorder both lead to AD, the anti-stress program may very well be of help there, all indicating that the stress and the molecular mechanism deduced from can be a significant finding in recent years.

Biography

Gregory Yeh earned his B.S. degree in physics from Holy Cross College in 1957, his M.S. degree in engineering physics from Cornell University in 1960, and his Ph.D. degree in polymer physics from Case Institute of Technology in 1966. From 1960-64, he worked as a research physicist at Goodyear Tire and Rubber Company and then as a senior research physicist at General Tire and Rubber Company. After completing postdoctoral studies at Case Institute of Technology in 1966, Professor Yeh joined the faculty of the University of Michigan College of Engineering as an assistant professor in 1967. He was promoted to associate professor in 1969 and professor in 1972.

His work, documented in 80 scientific publications and numerous invited presentations at scientific meetings all over the world, spanned a wide range of timely topics, with emphasis on the morphology and kinetics of single and multiple polymeric systems and on solid-state polymer processing and deformation. He also made seminal contributions to the morphology and kinetics of strain-induced crystallization of polymers and to the elucidation of chain conformation in amorphous polymers.

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