Lloyd L. Tran

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Biography

Lloyd L. Tran, is the Chairman and Chief Executive Officer of Biomed Industries, Inc., a biotechnology company focused on developing innovative therapies for neurodegenerative, metabolic, and cardiovascular diseases. With more than 30 years of experience in pharmaceutical research and development, he has held scientific and leadership positions at major pharmaceutical and biotechnology organizations, including Pfizer and Biomed Pharmaceutical, Inc, Dr. Tran is the architect of the Unified Theory of Neurodegenerative, Metabolic, and Cardiovascular Diseases and holds multiple international patents related to therapies for Alzheimer's disease, obesity, stroke, and metabolic disorders. He earned his Ph.D. in Medicinal Chemistry from Victoria University of Wellington, New Zealand.

Linkage of Obesity and Other Chronic Diseases: Unified Theory of Neurodegenerative, Metabolic and Cardiovascular Diseases

Abstract:

Background: Obesity, Alzheimer's disease (AD), and stroke have traditionally been viewed as distinct disorders. Increasing evidence, however, suggests they share common biological mechanisms, including chronic inflammation, mitochondrial dysfunction, insulin resistance, endothelial injury, oxidative stress, and impaired cellular regeneration. These interconnected processes may represent a common biological substrate underlying neurodegenerative, metabolic, and vascular diseases. The Unified Theory of Neurodegenerative, Metabolic and Cardiovascular Diseases proposes that these conditions arise from overlapping systems-level dysfunction rather than isolated organ-specific pathology. We evaluated findings from three related therapeutics—NA-831 for AD, NA-931 for obesity, and NA-911 for ischemic stroke—to assess whether targeting shared pathways can provide benefits across multiple chronic diseases.

Methods: Clinical and translational data from Phase 2 studies of NA-831 and NA-931, together with preclinical and clinical evaluations of NA-911, were reviewed. NA-931 is an oral quadruple receptor agonist targeting IGF-1, GLP-1, GIP, and glucagon receptors. NA-831 is an oral neuroprotective and neurogenic therapy developed for AD based on the Neurogenesis Hypothesis. NA-911 is a structurally related neuroprotective compound developed for ischemic stroke.

Results: In a randomized Phase 2 study, NA-931 produced dose-dependent weight reductions of up to 13.8% after 13 weeks, with up to 72% of treated subjects achieving at least 12% weight loss versus 2% receiving placebo. Skeletal muscle mass was preserved, and adverse events were predominantly mild, in a placebo-controlled Phase 2 trial involving 112 subjects with MCI, mild AD, or moderate AD, NA-831 demonstrated a 4.1-point improvement on ADAS-Cog-13 versus placebo (p=0.001), with 78% of treated patients showing clinical improvement on CIBIC-Plus (p=0.01). The drug was well tolerated without serious adverse events, NA-911 reduced infarct volume by approximately 60% in ischemic stroke studies and demonstrated efficacy within a 9–12-hour therapeutic window, together with favorable pharmacokinetics, blood-brain barrier penetration, and safety.

Conclusions: The clinical findings from NA-831, NA-931, and NA-911 provide convergent evidence supporting a Unified Theory of Neurodegenerative, Metabolic and Cardiovascular Diseases. These observations support systems-based therapeutic strategies aimed at restoring biological resilience across neurodegenerative, metabolic, and vascular disorders.