

Vaccine for Psychiatric Disorders

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Mental health is a major public health problem. Mental disorders include: depression, bipolar affective disorder, schizophrenia and other psychoses, dementia, intellectual disabilities and developmental disorders including autism. They are generally characterized by a combination of abnormal thoughts, perceptions, emotions, behavior and relationships with others. Globally, an estimated 300 million people are affected by depression alone. Although there are various strategies to treat psychiatric disorders, there is a need for new ones.

We examined the advances in immunology to find the suitable immunological approaches for psychiatric disorders. Recent advances in research show that inflammation as one of the triggers for psychiatric disorders. Treating inflammation using immune therapy approach is gaining momentum. Inflammatory markers can act as detectable secondary biological markers for psychiatric disorders. Treating inflammation can help mitigate the psychiatric disorders to the extent that they are causing it.

Some studies have shown that there is an increased proinflammatory response in patients diagnosed with depression, indexed by an elevation in C-reactive protein, and acute phase cytokines such as IL-6 and TNF-alpha. Antidepressants have been shown to suppress the inflammatory response, whereas electroconvulsive therapy results in acute elevations in proinflammatory markers. This demonstrates the nuanced nature between inflammation and depression that warrants further investigation.

Intravenous Immunoglobulins(IvIg) are well known as a broad-spectrum treatment option for many diseases involving inflammation, with minimal side effects. We present possible use of IvIgs initially, and propose other prophylactic and therapeutic vaccines for psychiatric illness.

Biography:

Dr. Srinivasa K. Rao is a biotechnology, life sciences, biomedical scientist with experience in teaching, basic research, R&D, training, liaison and business development. Currently he is popularizing, farming and processing quinoa in India with the support of farmers in India and Bolivia. He edited a book 'Quinoa: Nutritional & Health Benefits'. He launched a brand, "Dr. Quinoa" in the Indian market to make the grain more affordable.

Dr. Rao has teaching experience in cell & molecular biology, developmental biology and biotechnology at City University of New York (CUNY). His Ph.D. thesis from the University of Paris, France in 1988 was on the molecular genetics of hemoglobinopathies. His post-doctoral work at Columbia University & the Albert Einstein College of Medicine in New York was on gene expression and regulation. He was a PI at the LIJMC (Albert Einstein College of Medicine) worked in matrix biology and molecular diseases created an enzyme detection kit. Dr. Rao published over 30 peer reviewed scientific papers. He participated in, presented at, organized, co-chaired and chaired several scientific meetings over the last 25 years in France, India and the USA. Dr. Rao led business development for Shantha Biotech in India & the United States. His efforts led to the addition of new vaccines (dengue, rubella, pertussis, human papilloma virus (HPV) to the company's pipeline. Currently, Dr. Rao is the founder and President of North East Biotech, LLC. In addition to quinoa, the company's other projects in the area of malnutrition include the development of a growth meter and Poshak, a software for improving nutrition and food security using Neglected and Under Utilized Species (NUS). The company also created value for small oranges in India. Dr. Rao is frequently invited to lecture and motivate students in pharma, life sciences and biotechnology. His vision is to make the next generation part of the biotech revolution to solve problems such as malnutrition. At present working on book – Vaccines in Psychiatry.