TOEWALKING **to INDEPENDENCE.**

For the past several decades there is a global search for an effective treatment for Autism/ASD. Delineating the 'molecular denominator' could be the 'Eureka' moment or the starting point of 'Eureka movement'. DOAST conceptualised such an 'Eureka treatment window' by utilising the 'good enough' research outcomes than waiting for the ever elusive 'perfect answers'.

Till date since 2004 'DOAST Integrated Therapy' clinically utilises such 'good enough' therapeutic practices to replicate transformative results. The positive phenotypic data obtained indicate that a more appropriate description for ASD could be a "chronic, dynamic, reversible encephalopathy" rather than "static encephalopathy" as considered so far.

DOAST hypothesis on etiopathology proposes that dietary or environmental triggers, affecting the gut microbiome produce systemic inflammatory cytokines on a chronic basis. This downstream inflammation could signal upstream molecular unrest, ultimately affecting synaptic connectivity in susceptible individuals. Therapeutically by effectively controlling the downstream inflammatory pathology, we could initiate reestablishment of upstream molecular order. Molecular order restored could activate the dormant neuronal pools, improve connectivity and restore functional integration and independence.

The applied therapy protocol uses dietary regulation with millennia-old traditional Indian medicinal techniques and medicines. Their corrective therapeutic concept is toxin elimination-rejuvenation and regeneration. This therapeutic concept is in complete synergy with the present-day technological understanding of chronic disease as cellular stress, molecular disorder, cytokines and signal triggers between body and brain. Improved behaviour and cognition of individuals thus treated lends credence to this common denominator as an autism treatment methodology.

'Cognitive, emotional and synaptic functions of the brain basically rely on the macromolecular computing system of RNA to protein and protein to protein interactions which appear to be the result of fine-grained information, encoded and accumulated over evolutionary time'. Hence exhibited symptoms in ASD could be the manifestations of signalling and metabolic derangements as a result of 'two hit onset mechanism' where 'permissive genetic landscape' interact with a series of environmentally destabilized dominos.

Neuroscience to-day is attempting to scratch the surface of this relationship between nutrition, environment, and the brain through the understanding of epigenetic mechanisms.

The obtained phenotypic data indicates that 'DOAST Integrated Therapy' targets epigenetic mechanisms of interconnected pathways in a synergistic fashion. In this 'everyday epigenetics', process brings dormant functional areas into activity and overcomes 'Closed-loop phenomena' of autism to achieve **functional connectivity** and **independent existence.**

In a dogma challenging proposal, using this epigenetic and molecular denominator based 'DOAST Integrated **therapy'** as a physiological probe, we plan to study the linear, causal relationship between cellular-level changes and behavioural problems within the high-performance environment of the human nervous system.