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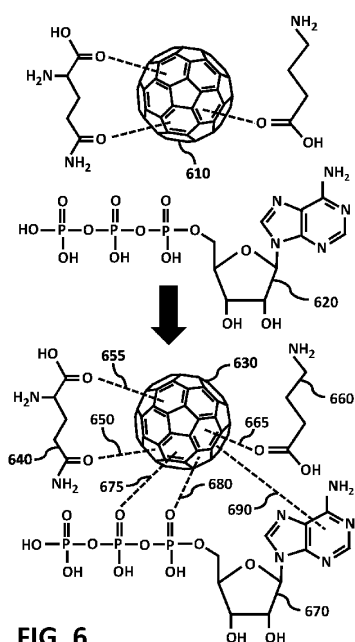


FIG. 6

(57) Abstract: A nanoparticle composed of buckminsterfullerene bonded to glutamine, gamma amino butyric acid (GABA) and adenosine triphosphate is provided. This nanoparticle helps to regulate the energy metabolism, neural excitability, and signal transduction within the synapse and between the astrocytes and the neuronal networks of the human brain when these become dysfunctional. It is intended as a treatment for Alzheimer's disease, Lewy Body disease and other neuropathological diseases of the glutamine-glutamate-GABA cycle. Utility for remediating comorbid sexual dysfunction is promoted, as well as the antioxidant and protein oligomer disassembly properties. The adenosine triphosphate adduct provides a reversible inorganic phosphate energy storage and supply, the glutamine adduct provides a stable reservoir of this amino acid that is resistant to breakdown by reactive oxygen species, reactive nitrogen species, and astrocytes. The GABA and buckminsterfullerene functional groups are anti-oxidants to treat the most oxidatively stressed regions at neural structures.