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(54) Title: COMPOSITION, SYNTHESIS AND THERAPEUTIC APPLICATIONS OF POLYAMINES

(57) Abstract: This invention relates to a process of synthesis and composition of open chain (ring), closed ring, linear branched and or substituted polyamines, polyamine derived tyrosine phosphatase inhibitors and PPAR partial agonists/partial antagonists via a series of substitution reactions and optimizing the bioavailability and biological activities of the compounds. Polyamines prevent the toxicity of neurotoxins and diabetogenic toxins including paraquat, methyphenyl pyridine radical, rotenone, diazoxide, streptozotocin and alloxan. These polyamines can be to treat neurological, cardiovascular, endocrine acquired and inherited mitochondrial DNA damage diseases and other disorders in mammalian subjects, and more specifically to the therapy of Parkinson's disease, Alzheimer's disease, Lou Gehrig's disease, Binswanger's disease, Olivopontine Cerebellar Degeneration, Lewy Body disease, Diabetes, Stroke, Atherosclerosis, Myocardial Ischemia, Cardiomyopathy, Nephropathy, Ischemia, Glaucoma, Presbycusis, Cancer, Osteoporosis, Rheumatoid Arthritis, Inflammatory Bowel Disease, Multiple Sclerosis and as Antidotes to Toxin Exposure.



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