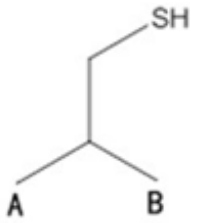
What is claimed is:

CLAIMS

1. Use of a pharmaceutical composition in the manufacture of a medicament for inhibiting aggregation of a protein in a subject in need thereof, said pharmaceutical composition comprising a compound of formula (I),



(I),

or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to inhibit the aggregation of the protein or peptide, wherein

(i) A is $-CH_2NHR'$ and B is $-CH_2NHR$, or A = -NRR' and B = H; and

(ii) each of R and R′ are, independently, selected from H, C_1-C_6 alkyl, and C_1-C_6 heteroalkyl, with the proviso that R and R' are not both H if B = H.

2. The use of claim 1, wherein the protein is selected from TDP-43, alpha-synuclein, tau, amyloid beta, PolyQ htt, islet amyloid polypeptide and prions.

3. The use of claim 1, wherein the subject has a neurodegenerative disease characterized by misfolding and/or aggregation of endogenous proteins.

4. The use of claim 3, wherein the neurodegenerative disease is:

(i) Parkinson's disease, prion disease, Alzheimer's disease, multiple system atrophy, Diffuse Lewy body disease, frontotemporal dementia, amyotrophic lateral sclerosis, Huntington's disease, spinocerebellar ataxias and other Poly-Q diseases, or hereditary cerebral amyloid angiopathy;

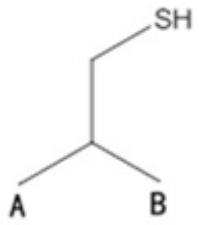
(ii) a prion disease selected from Creutzfeldt-Jakob disease, variant Creutzfeldt-Jakob disease, genetic human prion disease, Bovine Spongiform Encephalopathy (BSE) and Scrapie;

(iii) a synucleinopathy, optionally wherein the synucleinopathy is selected from Parkinson's disease (PD), dementia with Lewy bodies (DLB) and multiple system atrophy (MSA).

5. The use of claim 1, wherein the subject has a disease or condition characterized by amyloidosis, optionally wherein the amyloidosis is selected from primary systemic amyloidosis (AL amyloidosis), reactive systemic amyloidosis (AA amyloidosis), type II diabetes, injection-localized amyloidosis, beta-2 microglobulin amyloidosis, hereditary non-neuropathic amyloidosis and Finnish hereditary systemic amyloidosis.

6. The use of claim 1, wherein the subject has a disease or condition characterized by ocular protein aggregation, optionally wherein the disease or condition is selected from cataracts and presbyopia.

7. Use of a pharmaceutical composition in the manufacture of a medicament for treating a condition associated with mitochondrial dysfunction in a subject in need thereof, said pharmaceutical composition comprising a compound of a compound of formula (I),



(I),

or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to inhibit the aggregation of the protein or peptide, wherein

(i) A is -CH_2NHR' and B is -CH_2NHR, or A = -NRR' and B = H; and

(ii) each of R and R′ are, independently, selected from H, C_1-C_6 alkyl, and C_1-C_6 heteroalkyl,

with the proviso that R and R' are not both H if B = H.

8. The use of claim 7, wherein said condition is a neurodegenerative disorder, a neuropsychiatric disorder, diabetes, metabolic disease, an ocular disorder associated with mitochondrial dysfunction, an ischemia related condition, aging, mitochondrial toxicity associated with therapeutic agents, or migraine.

9. The use of claim 8, wherein said condition is:

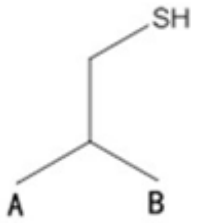
(i) a neurodegenerative disorder selected from Friedrich's ataxia, amyotrophic lateral sclerosis, mitochondrial myopathy, encephalopathy, lactacidosis, stroke (MELAS), myoclonic epilepsy with ragged red fibers (MERFF), epilepsy, Parkinson's disease, Alzheimer's disease, and Huntington's disease;

(ii) a neuropsychiatric disorder selected from bipolar disorder, schizophrenia, depression, addiction disorders, anxiety disorders, attention deficit disorders, personality disorders, autism, and Asperger's Syndrome;

(iii) an ocular disorder associated with mitochondrial dysfunction selected from glaucoma, diabetic retinopathy and age-related macular degeneration; or

(iv) an ischemia related condition resulting from vascular occlusion, arteriosclerosis, heart valve diseases, tachycardia, hypertension and hypotension.

10. Use of a pharmaceutical composition in the manufacture of a medicament for treating a chronic inflammatory condition in a subject in need thereof, said pharmaceutical composition comprising a compound of a compound of formula (I),



(I),

or a pharmaceutically acceptable acid addition salt thereof, in an amount sufficient to inhibit the aggregation of the protein or peptide, wherein

(i) A is -CH_2NHR' and B is -CH_2NHR, or A = -NRR' and B = H; and

(ii) each of R and R′ are, independently, selected from H, C_1-C_6 alkyl, and C_1-C_6 heteroalkyl, with the proviso that R and R' are not both H if B = H.

11. The use of claim 10, wherein said chronic inflammatory condition is selected from rhinosinusitis, arthritis, dermatitis, vasculitis, acute malaria, sickle cell disease, a gastrointestinal inflammatory condition, or an inflammatory pulmonary condition, optionally wherein said chronic inflammatory condition is:

(i) an inflammatory pulmonary condition selected from asthma, chronic obstructive pulmonary disease (COPD), physical trauma-induced pulmonary conditions, emphysema, bronchitis, sarcoidosis, histiocytosis, lymphangiomyomatosis, acute lung injury, chronic lung disease, bronchopulmonary dysplasia, pneumonia, airway exacerbations, and acute respiratory distress syndrome (ARDS); or

(ii) a gastrointestinal inflammatory condition selected from inflammatory bowel disease (IBD), ulcerative colitis (UC), Crohn's disease (CD), colitis, and chronic hepatis, such as viral hepatitis, alcohol related hepatitis and non-alcoholic fatty hepatitis.

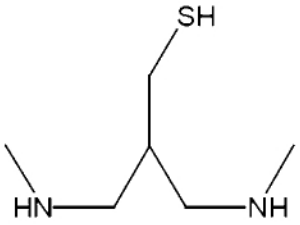
12. The use of claim 10, wherein said chronic inflammatory condition is an autoimmune disease, optionally wherein said autoimmune disease is selected from multiple sclerosis, diabetes Type I, rheumatoid arthritis, juvenile rheumatoid arthritis, psoriatic arthritis, pancreatitis, psoriasis, plaque psoriasis, guttate psoriasis, inverse psoriasis, pustular psoriasis, erythrodermic psoriasis, paraneoplastic autoimmune diseases, autoimmune hepatitis, bullous pemphigoid, myasthenia gravis, inflammatory bowel disease, Crohn's disease, ulcerative colitis, celiac disease, thyroiditis, Sjogren's syndrome, Guillain-Barre disease, Raynaud's phenomenon, Addison's disease, primary biliary cirrhosis, primary sclerosing cholangitis, non-alcoholic fatty liver disease, and non-alcoholic steatohepatitis, and diabetes.

13. The use of claim 10, wherein said chronic inflammatory condition is a neuroinflammatory disease.

14. The use of claim 13, wherein said neuroinflammatory disease is selected from Multiple sclerosis, diabetes Type I, neuromyelitis optica, anti-myelin oligodendrocyte glycoprotein antibody disorder, autoimmune encephalitis, transverse myelitis, optic neuritis and neurosarcoidosis or is a neurodegenerative disorder selected from Friedrich's ataxia, amyotrophic lateral sclerosis, mitochondrial

myopathy, encephalopathy, lactacidosis, stroke (MELAS), myoclonic epilepsy with ragged red fibers (MERFF), epilepsy, Parkinson's disease, Alzheimer's disease, and Huntington's disease.

15. The use of any one of claims 1, 7, or 10, wherein the compound is



PrC-210,

or a pharmaceutically acceptable salt thereof.