CLAIMS

1. A process for preparing an improved dialysis fluid formulation effective for extracorporeal treatment, through a blood filtration process, of a Beta-Amyloid associated pathological condition in a subject, said process comprises preparing a composition comprising KLVFF peptide, or a variant thereof, as the capturing and binding agent, and a carrier therefor, and mixing said composition with a dialysate solution.

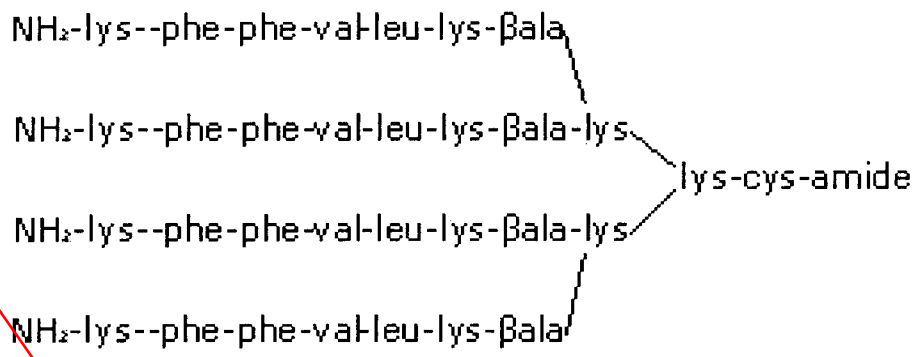
2. A process according to claim 1, wherein the variant includes FFVLK peptide which is a reverse analog of KLVFF peptide.

3. A process according to claim 1, wherein the dialysis fluid consists of acid, water, and sodium bicarbonate, and wherein the dialysis fluid further consists of substances that are required to re-establish ionic equilibrium of the blood.

4. A process according to claim 1, wherein the subject has a pathological condition selected from a group consisting of: Alzheimer's Disease, diabetes, Parkinson's Disease, Huntington's Disease, cataracts, muscular dystrophy, and Down's Syndrome.

5. A process according to claim 1, wherein the capturing and binding agent, or one of its derivatives, is brought into dosage form together at least one solid, liquid, or semi-liquid carrier and/or auxiliary substance.

6. A process according to claim 1, wherein the capturing and binding agent is a tetramer peptide containing four copies of the monomer peptide in reverse sequence, as shown below:



7. A process according to claim 6, wherein the tetramer capturing and binding agent is linked, through its cys side chain, to an 8-arm polyethylene glycol maleimide to form a molecule of the capturing and binding agent with 32 Beta-Amyloid capturing arms.

8. A process according to claim 1, wherein the blood filtration process consists of a blood filtration device configured to separate plasma constituents from other cellular components of the blood, wherein the blood filtration device includes a blood circuit side adapted to receive the extracted blood, a dialysate side adapted to receive the dialysis fluid formulation, and a permeable membrane that separates the blood circuit side and the dialysate side.

9. A process according to claim 8, characterized in that the capturing and binding agent has a binding capacity sufficient to attract and bind the neurotoxic Beta-Amyloid peptides from the plasma constituents circulating in the blood circuit side.

10. A process according to claim 8, characterized in that the permeable membrane is a semi-permeable membrane having pore sizes that are substantially larger than the sizes of the Beta-Amyloid peptides and an aggregated form thereof, whereby the

Beta-Amyloid peptides and aggregated forms thereof are permitted to pass through the semi-permeable membrane.

11. A process according to claim 8, wherein blood filtration device is a hemodialysis machine.

12. A process according to claim 8, wherein the permeable membrane is characterized by a porous material which allows low molecular weight substances, including a wide array of toxins, to pass therethrough.

13. A process according to claim 10, wherein the semi-permeable membrane is any of the following: a synthetic based membrane and a cellulose based membrane.

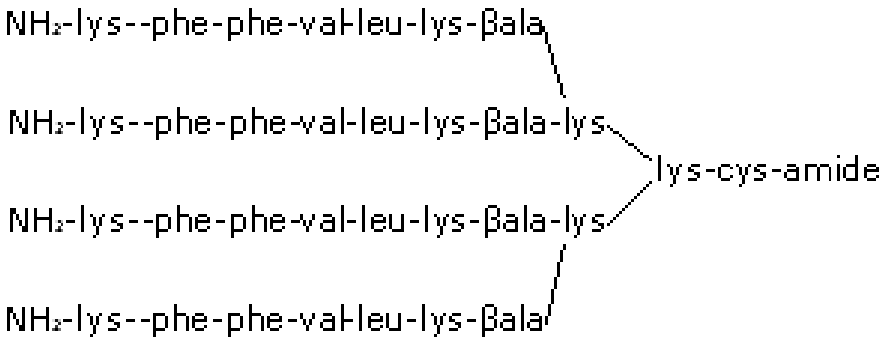
CLAIMS

1. A process for preparing an improved dialysis fluid formulation, the process comprises: preparing a composition comprising KLVFF peptide, or a variant thereof, as the capturing and binding agent, and a carrier therefor; and mixing said composition with a dialysate solution.

2. The process according to claim 1, wherein the variant includes FFVLK peptide which is a reverse analog of KLVFF peptide.

3. The process according to claim 1, wherein the capturing and binding agent, or one of its derivatives, is brought into dosage form together at least one solid, liquid, or semi-liquid carrier and/or auxiliary substance.

4. The process according to claim 1, wherein the capturing and binding agent is a tetramer peptide containing four copies of the monomer peptide in reverse sequence, as shown below:



5. The process according to claim 4, wherein the tetramer capturing and binding agent is linked, through its cys side chain, to an 8-arm polyethylene glycol maleimide to form a molecule of the capturing and binding agent with 32 Beta-Amyloid capturing arms.