

CLAIMS

1. Superstructured gold clusters Au-pX, which consist of gold atoms and at least one ligand, where said gold atoms in said cluster are in a number comprised between 2 and 100 or the cluster dimension are smaller than 2 nm, for use in the treatment of diseases related to oxidative stress.
2. Superstructured gold clusters Au-pX for use according to claim 1, where said gold atoms are 8, and said superstructured cluster is called Au₈-pX.
3. Superstructured gold clusters Au-pX for use according to claim 1 or 2, where said ligand is 11-mercaptoundecanoic acid.
4. Superstructured gold clusters Au-pX for use according to one of claims 1 to 3, where said pathology is determined by excess ROS.
5. Superstructured gold clusters Au-pX for use according to one of claims 1 to 4, where said pathology is selected from Friedreich's ataxia (FRDA), Alzheimer's disease (AD), Huntington disease (HD), Parkinson's disease (PD).
6. Superstructured gold clusters Au-pX for use according to one of claims 1 to 5, where said pathology is Friedreich's ataxia (FRDA).
7. Superstructured gold clusters Au-pX for use according to one of claims 1 to 6, where said treatment is intravenously.
8. Superstructured gold clusters Au-pX for use according to one of claims 1 to 5, wherein said treatment consists of a single intravenous administration.
9. Composition comprising superstructured gold clusters Au-pX, which consist of 8 gold atoms and at least one ligand and pharmacologically acceptable excipients for intravenous administration.