CLAIMS

1.) Use of a therapeutically effective amount of a composition for the preparation of a medicament for promoting remyelination of neurons in a mammal in need thereof, the composition comprising:

a.) pharmaceutical grade water;

b.) at least one processing enhancer; and

c.) gold nanocrystals suspended in said water forming a suspension, wherein said gold nanocrystals:

i.) have surfaces that include at least one characteristic selected from the group of characteristics consisting of: (1) no organic chemical constituents adhered or attached to said surfaces and/or (2) are substantially clean and do not have chemical constituents adhered or attached to surfaces, other than water or said processing enhancer, which alter the functioning of said nanocrystals;

ii.) have a mode particle size of less than about 50nm;

iii.) are present in said suspension at a concentration of about 2-2000ppm; and

d.) said suspension having a pH of between about 5 to about 9.5 and a zeta potential of at least about -30mv.

2.) The use of claim 1, wherein said suspension has a zeta potential of at least about -40 mV.

3.) The use of claim 1, wherein said gold nanocrystals are present in a concentration amount of 2-200ppm.

4.) Use according to claim 1 wherein said remyelination comprises at least one effect selected from the group of effects consisting of oligodendrocyte proliferation and differentiation.

5.) Use according to claim 4, wherein said remyelination comprises remyelination of neurons of the central nervous system.

6.) Use according to claim 1, wherein said composition is taken orally.

7.) Use of a therapeutically effective amount of a composition for preparation of a medicament for promoting remyelination of neurons in a mammal in need thereof, the

composition comprising an elemental gold nanosuspension.

8.) Use of a therapeutically effective amount of a composition for preparation of a medicament for promoting remyelination of central nervous system neurons in a mammal in need thereof, the composition comprising:

a.) pharmaceutical grade water;

b.) at least one processing enhancer; and

c.) gold nanocrystals suspended in said water forming a suspension, wherein said gold nanocrystals:

i.) have surfaces that include at least one characteristic selected from the group of characteristics consisting of: (1) no organic chemical constituents adhered or attached to said surfaces and/or (2) are substantially clean and do not have chemical constituents adhered or attached to surfaces, other than water or said processing enhancer, which alter the functioning of said nanocrystals;

ii.) have a mode particle size of less than about 50nm;

iii.) are present in said suspension at a concentration of about 2-2000ppm; and

d.) said suspension having a pH of between about 5 to about 9.5, a zeta potential of at least about -30mv.

9.) The use of claim 8, wherein said suspension has a zeta potential of at least about -40 mV.

10.) The use of claim 8, wherein said gold nanocrystals are present in a concentration amount of 2-200ppm.

11.) Use according to claim 8 wherein said remyelination comprises at least one effect selected from the group of effects consisting of oligodendrocyte proliferation and differentiation.

12.) Use according to claim 8, wherein said composition is taken orally.