Effect of superparamagnetic nanoparticles coated with various electric charges on \(\alpha\)-synuclein and \(\beta\)-amyloid proteins fibrillation process

[Javdani N, Rahpeyma SS, Ghasemi Y, Raheb J. Int J Nanomedicine. 2019;14:799–808.]

On page 800, the last paragraph of the subsection titled: Properties of trivalent and charged iron oxide nanoparticles (NanoFe3O4); in the fourth line, “Trivalent nanoiron dye: black” should read “Trivalent nanoiron dye: dark brown”.

On page 800, Super paramagnetic iron oxide nanoparticles subsection, “25, 50, and 100 mg/mL” should read “25, 50 and 100 \(\mu\)g/mL”.

On page 801, in the legend of Figure 1, in the Notes section “(A) Neutrally charged. (B) Positively charged. (C) Negatively charged.” should read “(A) Positively charged. (B) Neutrally charged. (C) Negatively charged.”

On page 801, subsection titled: Cell survival with MTT assay; the sentence “Then different charged nanoparticles with 2.5, 5 and 10 mg/mL…” should read “Then, different charged nanoparticles with 25, 50 and 100 \(\mu\)g/mL…”.

On page 802, Materials and methods section, the subsection title “Investigating the structure modification level of A\(\beta\)-protein at the presence of SPIONs” should read “Investigation of the secondary structure modification level of A\(\beta\)-protein and \(\alpha\)-synuclein at the presence of SPIONs”.

On page 802, under subsection titled: Investigating the secondary structure modification level of A\(\beta\)-protein at the presence of SPIONs; the sentence “…different concentrations of 2.5, 5, and 10 \(\mu\)g/L were first incubated…” should read “…different concentrations of 25, 50, and 100 \(\mu\)g/mL were first incubated…”.

On page 802, Results section, subsection titled: Magnetic power investigation and physicochemical properties of nanoparticle, the last sentence “Magnetic charges calculated using ZP set –4.15, 22.8, and –13.4 (mV) for plain” should read “Magnetic charges calculated using ZP set include –4.15, 22.8, and –13.4 (mV) for plain”.

On page 802, Results section, the subsection title “Investigating the structure modification level of A\(\beta\)-protein at the presence of SPIONs” should read “Investigation of the secondary structure modification level of A\(\beta\)-protein and \(\alpha\)-synuclein at the presence of SPIONs”.

On page 802 in the Results section, subsection: Investigation of the secondary structure modification level of A\(\beta\)-protein at the presence of SPIONs; the citation “Figure 2” should not have appeared in the manuscript as the TEM has not been included in the article.

On page 802, subsection titled: Investigation of A\(\beta\)-protein fibrillation process using the modifications in ThT fluorescence emission; the sentence “…charged nanoparticles with concentrations of 2.5, 5, and 10 \(\mu\)L were added…” should read “…charged nanoparticles with concentrations of 25, 50, and 100 \(\mu\)g/mL were added…”.

On page 802, subsection titled: Investigation of \(\alpha\)-synuclein protein fibrillation using ThT fluorescence emission modifications; the sentence “…with concentrations of 2.5 (Figure 6), 5 (Figure 7), and 10 (Figure 8) \(\mu\)L…” should read “…with concentrations of 25 (Figure 6), 50 (Figure 7), and 100 (Figure 8) \(\mu\)L…”.

On page 803, Figure 2, was inserted into the manuscript accidently and should be disregarded.

On page 803, in Table 1; FBS and nanoparticle values for samples 25 \(\mu\)L/+; 25 \(\mu\)L/−; and 25 \(\mu\)L/Plain were incorrect. The correct values are shown in the following table.
On page 804 Figure 3 should have been as follows.

| Sample | THT | β-Amyloid α-synuclein | FBS | Nanoparticle (SPION) |
|--------|-----|-----------------------|-----|----------------------|
| Negative Control | 10 µL | – | 90 µL | – |
| Positive Control | 10 µL | 20 µL | 70 µL | – |
| 25 µL+/− | 10 µL | 20 µL | 67.5 µL | 2.5 µL |
| 25 µL/Plain | 20 µL | 67.5 µL | 2.5 µL |

On page 804, Figure 3 legend; “…SPIONs effect with a concentration of 2.5 µL and different…” should read “…SPIONs effect with a concentration of 25 µg/mL and different…”.

On page 804, Figure 4 legend; “…SPIONs effect with a concentration of 5 µL and different…” should read “…SPIONs effect with a concentration of 50 µg/mL and different…”.

On page 804, Figure 4, in the figure key, the gray line “Positive charge” should be replaced with “Plain charge” and the dark blue line “plain charge” should read “Positive charge”.

On page 805, Figure 5 should have been as follows.

On page 805, Figure 5 legend; the sentence “…SPIONs effect with a concentration of 10 µL and different…” should read “…SPIONs effect with a concentration of 100 µg/mL and different…”.

On page 805, the sentence “…had negative charge encoded with –COOH ion was 2.5 µL and it was investigated…” should read “…had negative charge encoded with –COOH ion was 25 µg/mL and it was investigated…”.

On page 805, Figure 6 legend; the sentence “…SPIONs effect with concentration of 2.5 µg/mL and various…” should be replaced with “…SPIONs effect with concentration of 25 µg/mL and various…”.

On page 806, Figure 7 legend; “…SPIONs effect with concentration of 5 µL and various…” should be replaced with “…SPIONs effect with concentration of 50 µg/ml and various…”.On page 806, Figure 7, in the figure key, the yellow line “Positive charge” should be replaced with “Plain charge” and the gray line “Plain charge” should read “Positive charge”.On page 806, Figure 8 legend; “…SPIONs effect with concentration of 10 µL and various…” should read “…SPIONs effect with concentration of 100 µg/mL and various…”.