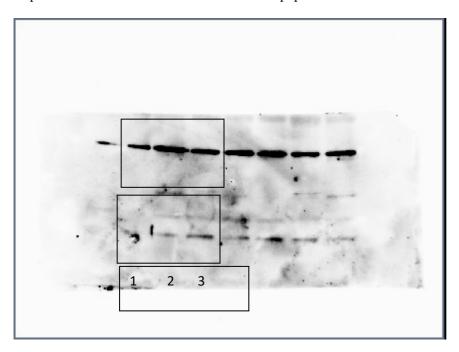
## **Supporting information S1**

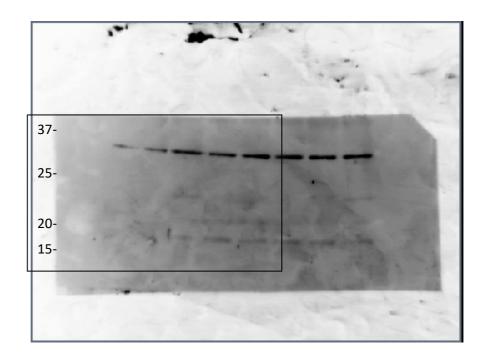
### Orginal blots of Figs 1, 2, 3, 4

Figure 1C: Expression of caspase-3 in HUVEC exposed to NPs (0.25 mg/ml). Cells were exposed to the biomaterials for 24 h and then lysed. (1: Ctr; 2:  $CoFe_2O_4$ ; 3.  $CoFe_2O_4$ -NH<sub>2</sub>)

Representative blot of the first version of the paper:

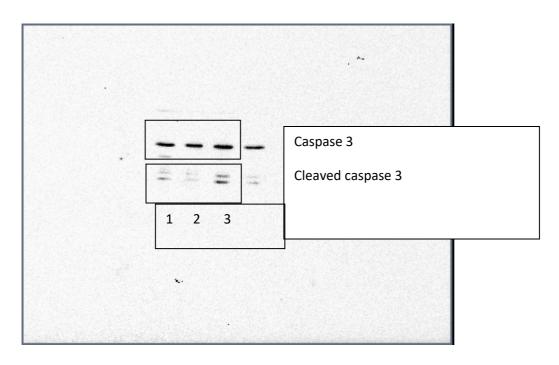


Blank:



# Second representative image:

# Cleaved caspase -3



Blank

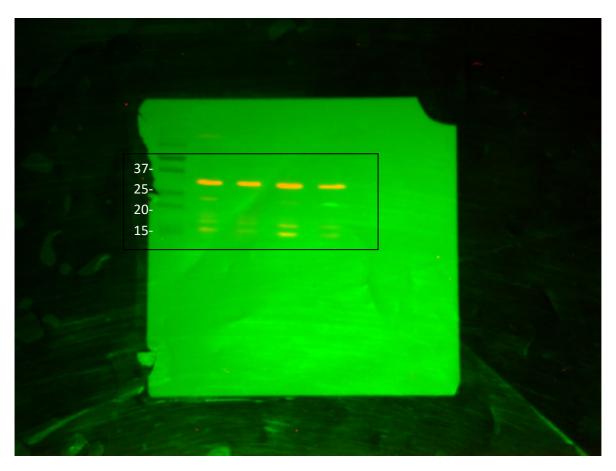
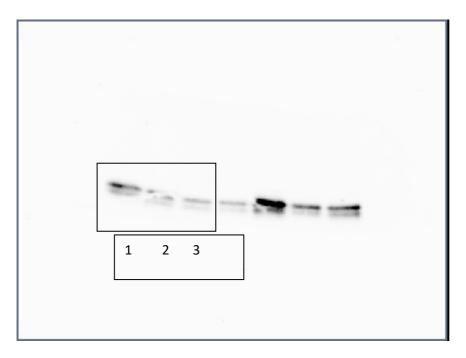


Figure 1E: Expression of p21 in HUVEC exposed to NPs (0.25 mg/ml). Cells were exposed to the biomaterials for 24 h and then lysed. (1: Ctr; 2:  $CoFe_2O_4$ ; 3.  $CoFe_2O_4$ -NH<sub>2</sub>)

### P21



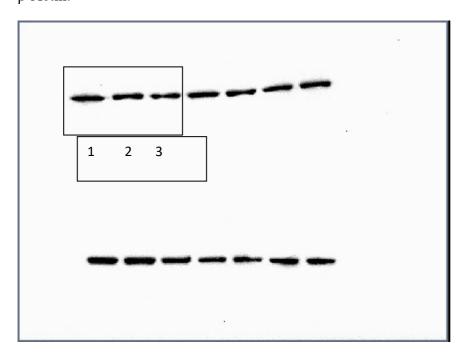
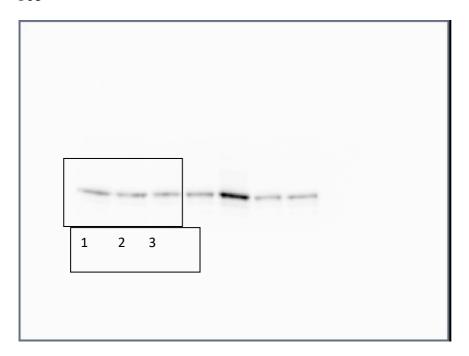


Figure 1F: Expression of p53 in HUVEC exposed to NPs (0.25 mg/ml). Cells were exposed to the biomaterials for 24 h and then lysed. (1: Ctr; 2: CoFe<sub>2</sub>O<sub>4</sub>; 3. CoFe<sub>2</sub>O<sub>4</sub>-NH<sub>2</sub>)

P53



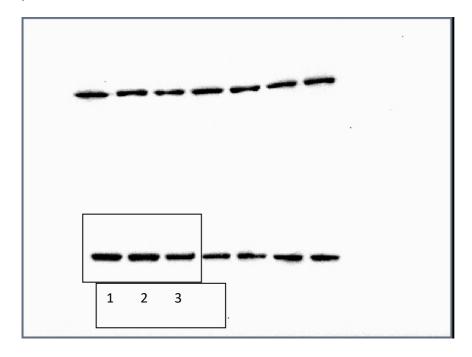
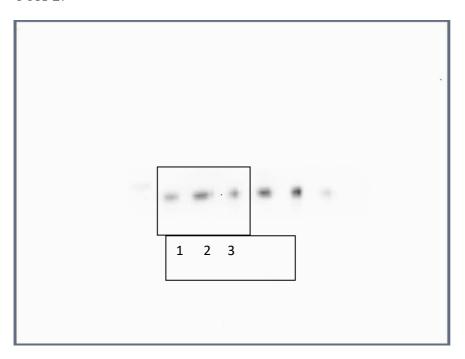
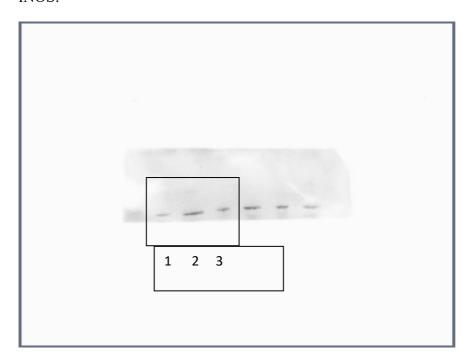


Fig 2D: Expression of COX-2 and iNOS in HUVEC exposed for 24 h to  $CoFe_2O_4$  NPs or  $CoFe_2O_4$ -NH<sub>2</sub> NPs (0.25 mg/ml) measured by western blot. Blots are representative of 3 experiments with overlapping results. (1: Ctr; 2:  $CoFe_2O_4$ ; 3.  $CoFe_2O_4$ -NH<sub>2</sub>)

#### COX-2:



#### iNOS:



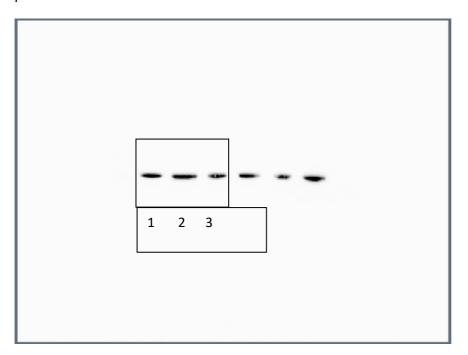


Fig 3C: Evaluation by western blot of the expression of cleaved caspase-3 in HUVEC exposed to CMC (1),  $CoFe_2O_4$ -CMC (2) or  $CoFe_2O_4$ -NH<sub>2</sub>-CMC (3) (0.5 mg/ml) for 24 h.

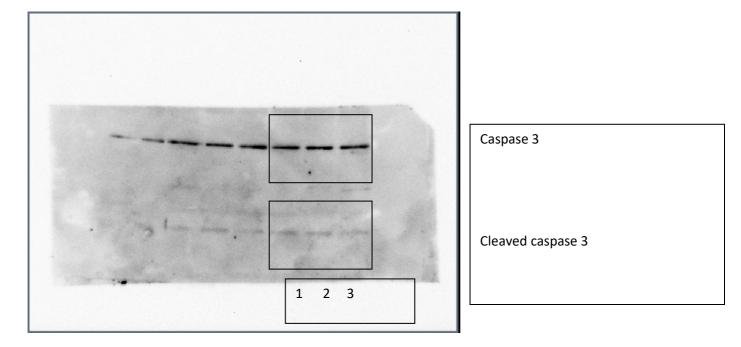
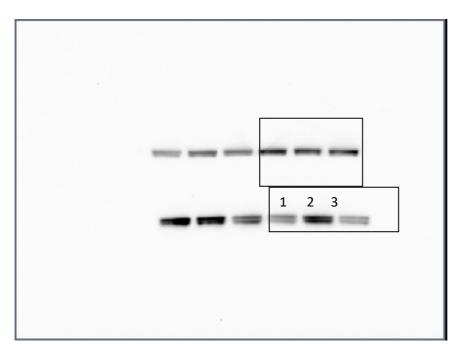


Fig 3E: Evaluation by western blot of the expression of p53 in HUVEC exposed to CMC (1),  $CoFe_2O_4-CMC$  (2) or  $CoFe_2O_4-NH_2-CMC$  (3) (0.5 mg/ml) for 24 h.

### P53:



#### P53 bianco:

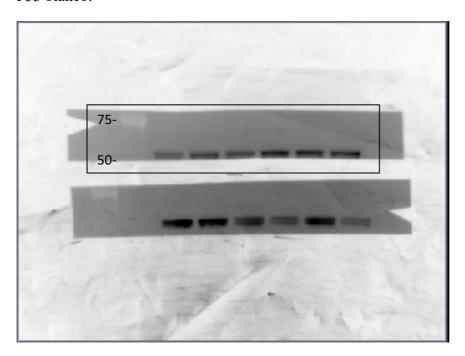
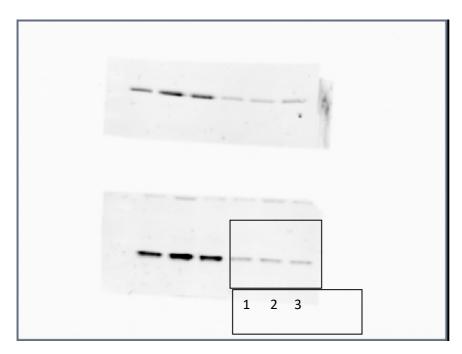


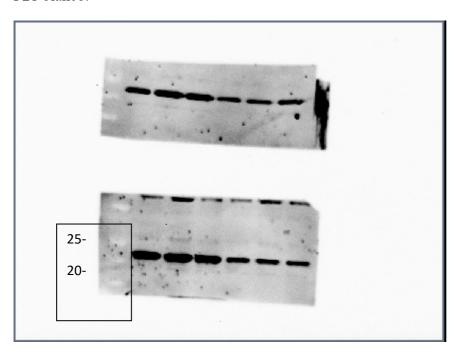


Fig 3F: Evaluation by western blot of the expression of  $\,p21$  in HUVEC exposed to CMC (1), CoFe<sub>2</sub>O<sub>4</sub>-CMC (2) or CoFe<sub>2</sub>O<sub>4</sub>-NH<sub>2</sub>-CMC (3) (0.5 mg/ml) for 24 h.

### P21:



#### P21 bianco:



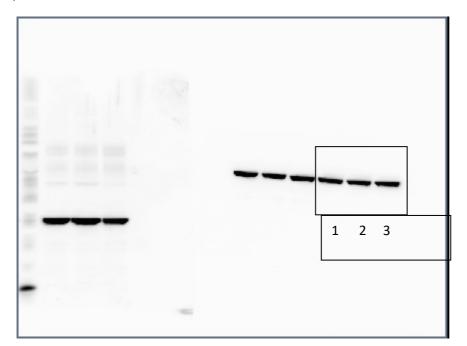
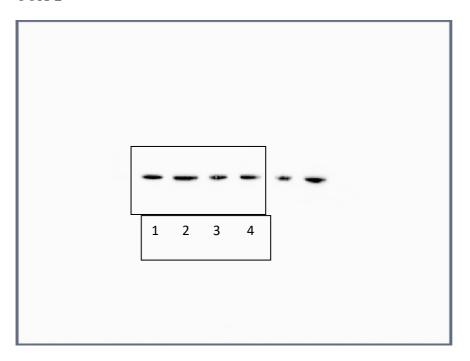


Fig 4B: Expression of COX-2 and iNOS in HUVEC exposed for 24 h to the biomaterials measured by western blot. (1. CMC, 2. CoFe<sub>2</sub>O<sub>4</sub>-CMC, 3. CoFe<sub>2</sub>O<sub>4</sub>-NH<sub>2</sub>-CMC, 4. Ctr)

#### COX-2



### iNOS

