

Figure S1: EDX spectrum for CFO nanoparticles. Presence of iron and cobalt is in accordance with ICP-OES results:

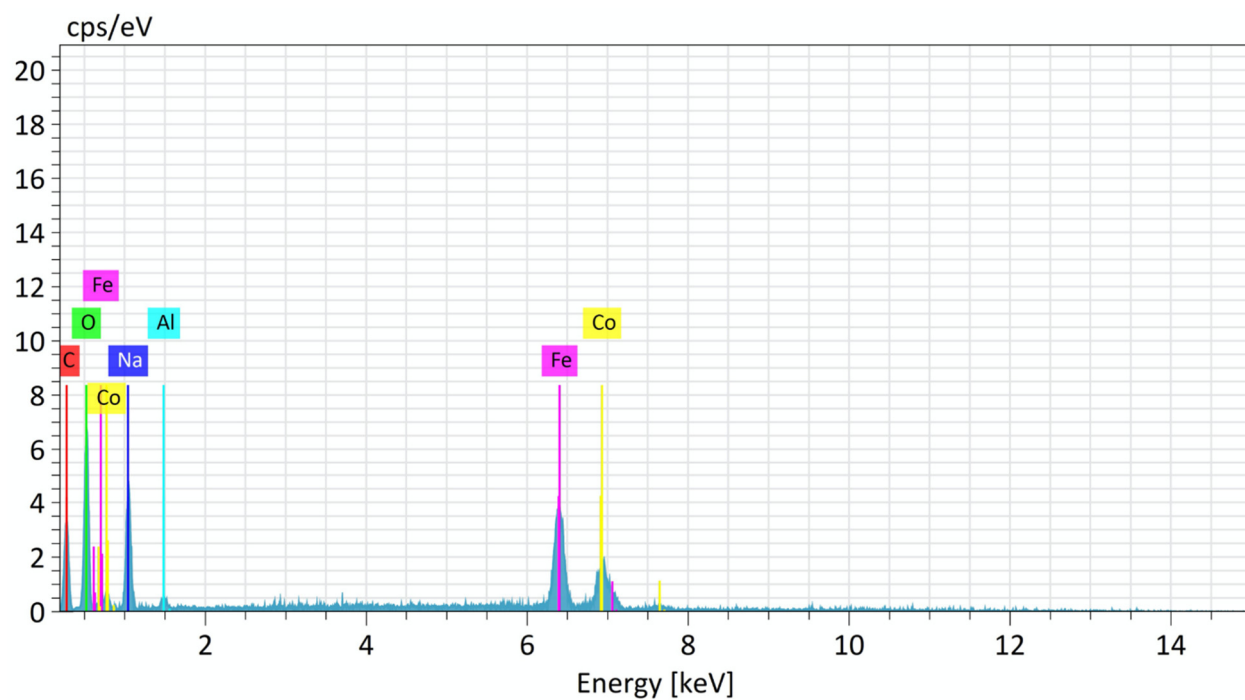


Figure S2: EDX spectrum for Au/CFO nanocomposite shows the presence of ferromagnetic material:

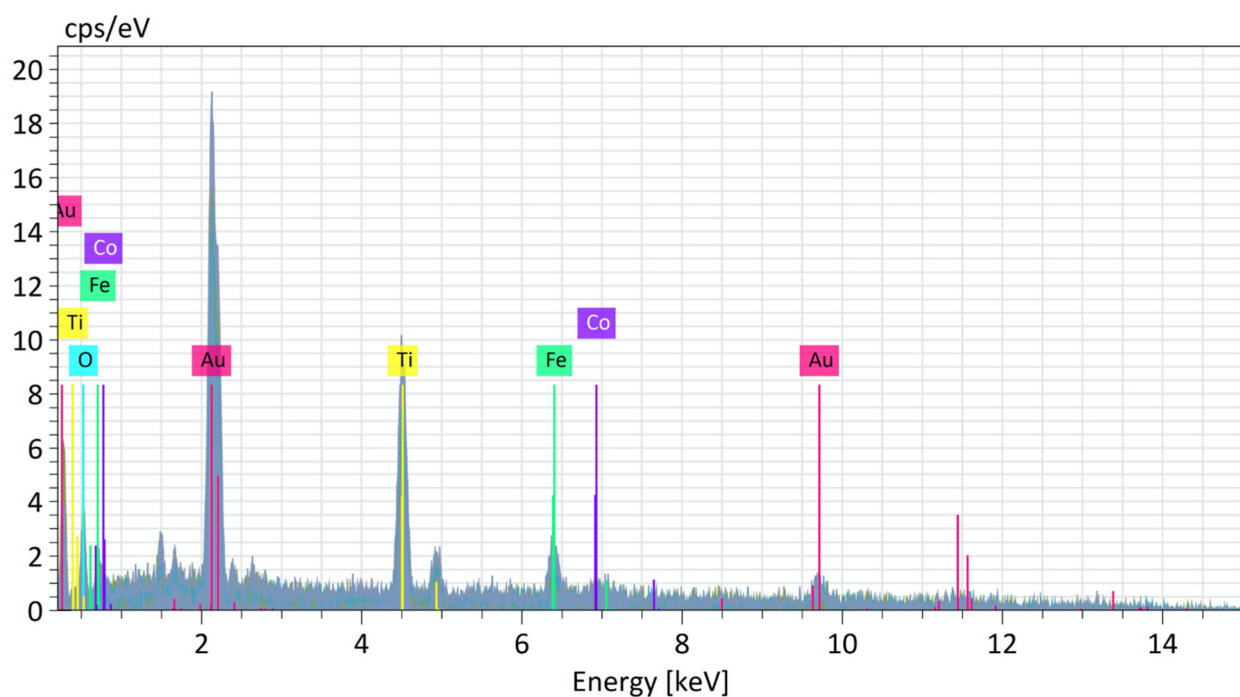


Figure S3: Relative viability of Jurkat cells after 2, 4, 8, 24, and 48 h of exposure with CFO magnetic nanoparticles covered with DHCA and Au/CFO composite

Composition	WST-1/CTR					
		2 h	4 h	8 h	24 h	48 h
CFO NPs covered with DHCA		ns	ns	ns	ns	ns
	10 µg/ml	ns	ns	ns	ns	ns
	50 µg/ml	ns	p=0,0481 *	ns	ns	ns
	100 µg/ml	ns	p=0,0368 *	ns	ns	ns
	10 µg/ml : 50 µg/ml					
	10 µg/ml : 100 µg/ml					
CFO NPs covered with DHCA and gold NPs covered with arginine	100 µg/ml : 50 µg/ml	p=0,0219 *				
		2 h	4 h	8 h	24 h	48 h
	10 µg/ml	ns	ns	ns	ns	ns
	50 µg/ml	ns	ns	ns	ns	ns
	100 µg/ml	p=0,0466 *	ns	ns	p=0,0123 *	ns
	10 µg/ml : 50 µg/ml					
	10 µg/ml : 100 µg/ml					
	100 µg/ml : 50 µg/ml	p=0,0065 **				

Cell viability was tested by WST-1 assay. Cytotoxic effect of 10, 50, and 100 µg/ml concentrations of nanoparticles on Jurkat cells was investigated. «ns» is used for statistically insignificant results. Green cells show the trend of growing proliferative activity of Jurkat cells, red cells are for the reducing proliferative activity. All cytotoxicity results were obtained by subtraction of blanc wells absorbance from experimental wells absorbance to eliminate the influence of nanoparticles and cell medium. All results are normalized by control and columns denoted by asterisks indicate results that were statistically different from the control. Control well was with the absence of nanocomposites. Kruskal-Wallis test using GraphPad Prism v.7.04 was used to compare each group to the control group. Statistical significance level between experimental and control groups (10 µg/ml; 50 µg/ml; 100 µg/ml) and between two experimental groups (10 µg/ml : 50 µg/ml; 10 µg/ml : 100 µg/ml; 100 µg/ml : 50 µg/ml) are presented by asterisks (\* for p value <0.0332, \*\* for p value 0.0021).