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SUPPORTING INFORMATION

Targeted Killing of Prostate Cancer Cells using Antibody-Drug conjugated Carbon Nanohorns

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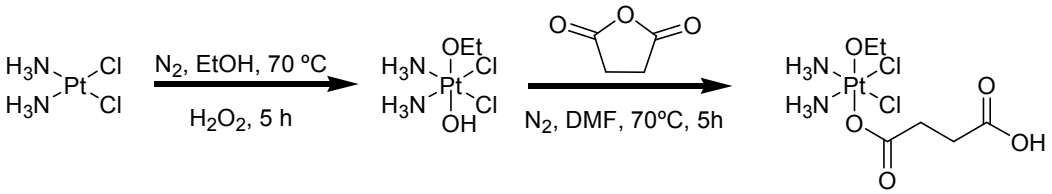

Figure S1. Synthesis of prodrug 3.

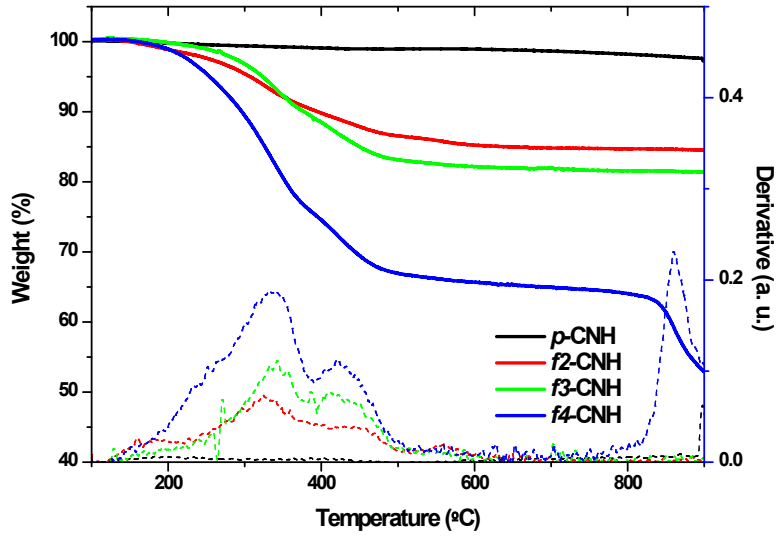

Figure S2. Thermogravimetric analyses of samples ***f2*-CNH**, ***f3*-CNH** and ***f4*-CNH** versus ***p*-CNH**. The dashed lines show the 1st derivative of the corresponding sample (same colour of the curve): ***f2*-CNH** shows two peaks at 325 and 400 ºC; ***f3*-CNH** shows two peaks at 345 and 417 ºC and ***f4*-CNH** shows three peaks at 335, 422 and 861 ºC.

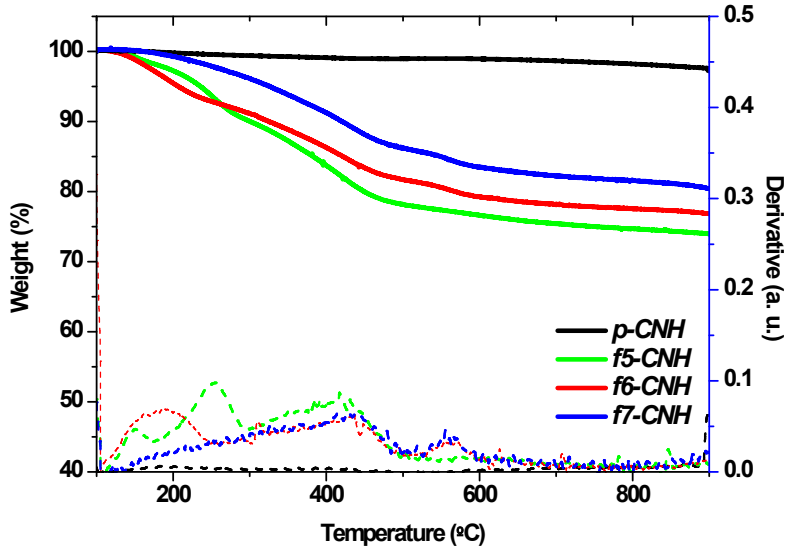

Figure S3. Thermogravimetric analyses of ***f5*-CNH, *f6*-CNH** and ***f7*-CNH** versus ***p*-CNH**. The dashed lines show the 1st derivative of the corresponding sample (same colour of the curve): ***f5*-CNH** shows three peaks at 150, 253 and 417 ºC; ***f6*-CNH** shows four peaks at 190, 310, 438 and 556 ºC and ***f7*-CNH** shows two peaks at 430 and 556 ºC.

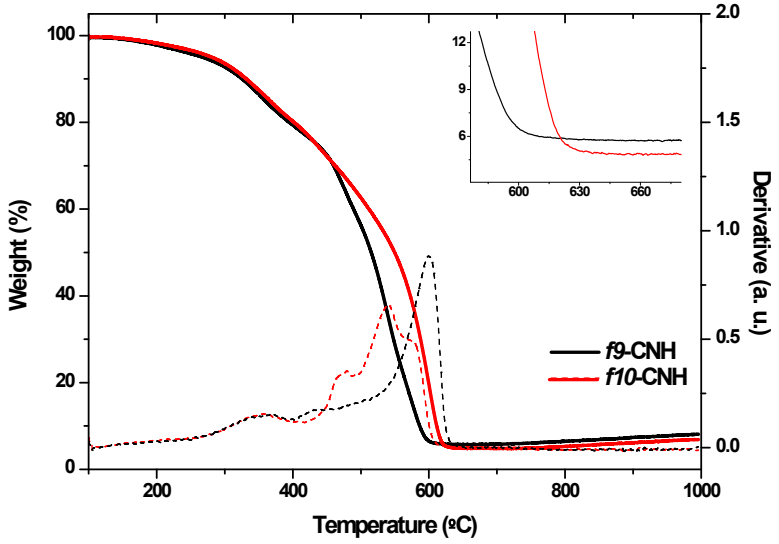

Figure S4. Thermogravimetric analysis under air of ***f*9-CNH** and ***f*10-CNH**. The inset shows the enlargement of the TGA in the point of finished oxidation. The increment in the quantity of residue is due to the presence of platinum in sample ***f*10-CNH**. The dashed lines show the 1st derivative of the corresponding sample (same colour of the curve): ***f*9-CNH** shows three peaks at 365, 430 and 600 ºC and ***f10*-CNH** shows four peaks at 356, 480, 540 and 575 ºC.

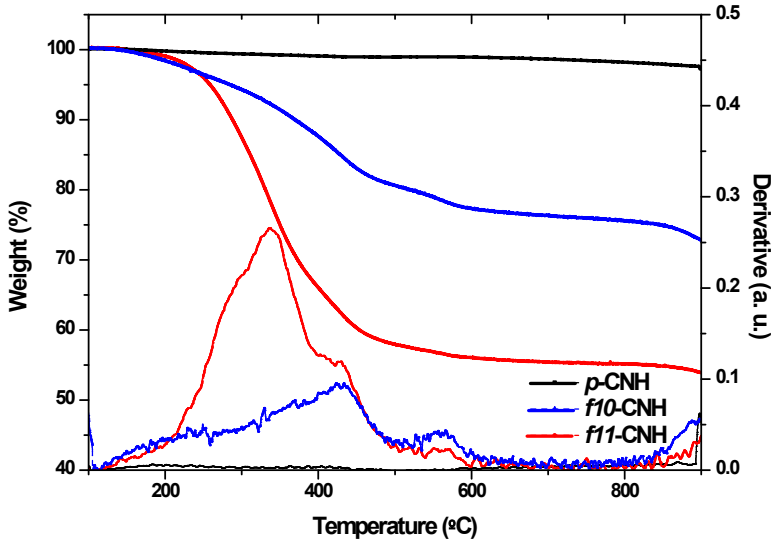

Figure S5. Thermogravimentric analysis of ***f11*-CNH** versus ***f10*-CNH** and ***p*-CNH**. The dashed lines show the 1st derivative of the corresponding sample (same colour of the curve): ***f10*-CNH** shows two peaks at 430 and 560 ºC and ***f11*-CNH** shows three peaks at 335, 430 and 565 ºC.

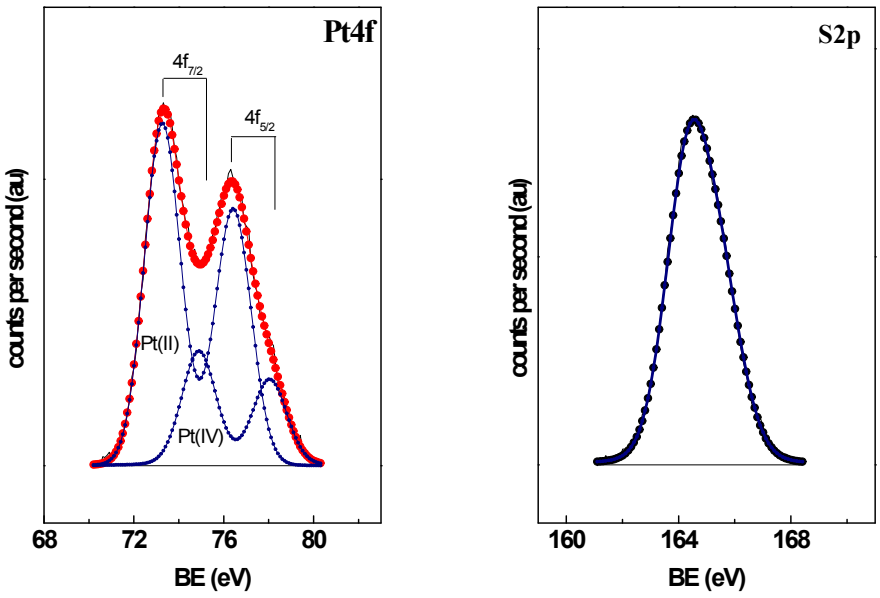

Figure S6. Pt4f and S2p XPS spectra of ***f11*-CNH**.

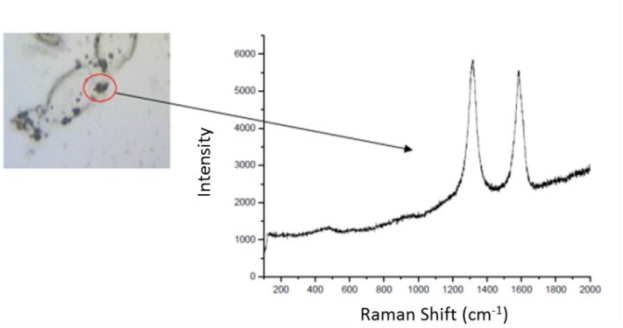

Figure S7. A typical Raman spectrum of CNHs at 633 nm acquired on PC-3-PSMA, PSMA^{+} cells, incubated with f11-CNH. The two bands can be identified as the D and G band at 1320 and 1600 cm^{-1}, respectively. The spectrum was recorded exciting with 1 mW, using a 20x objective and averaging for 10 s.

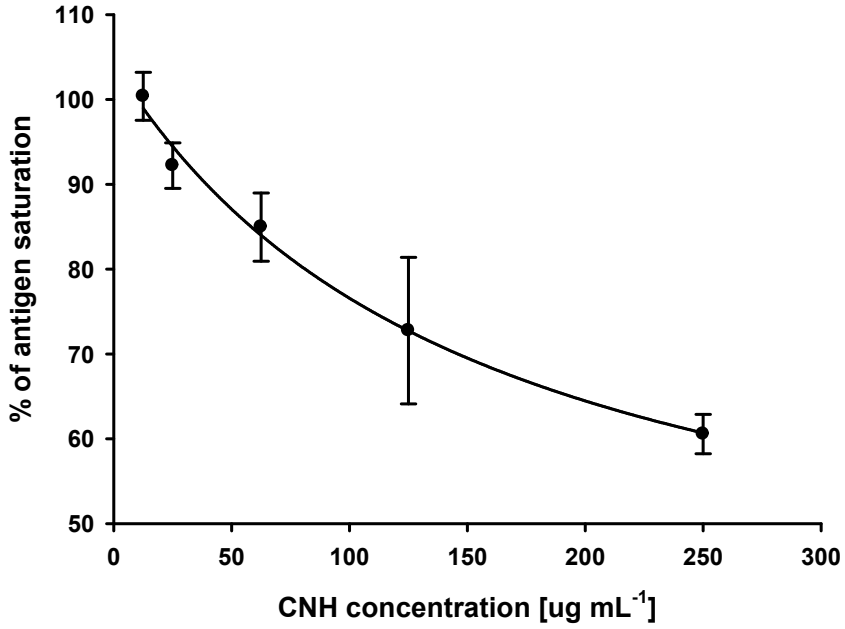

Figure S8. Specificity of ***f11*-CNH** hybrid binding on PC-3-PSMA cells. Competition between D2B-biotin Ab and ***f11*-CNH** hybrid for the binding to PSMA antigen sites. Mean ± SD data of three separate experiments.

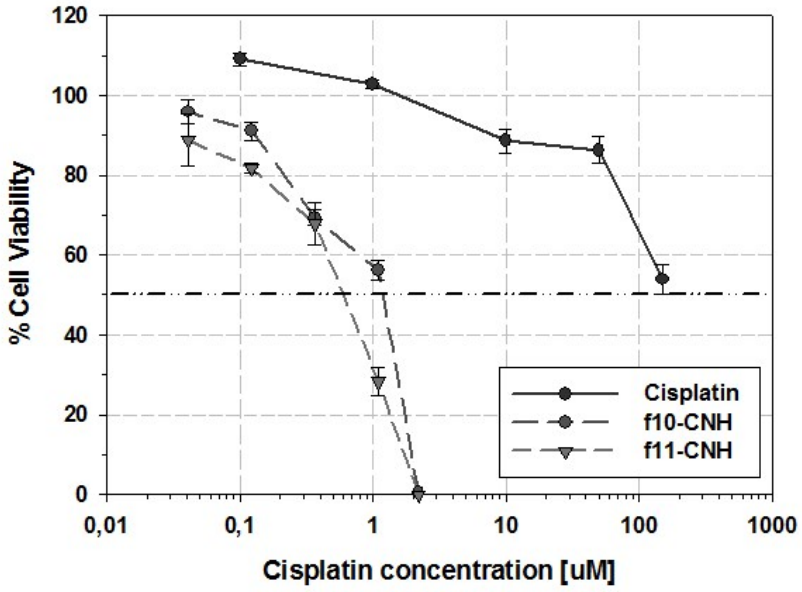

Figure S9. 24 h viability assay on PC-3-PSMA cells treated with cisplatin, ***f10-CNH*** and ***f11-CNH.*** Mean ± SD of three separate experiments.

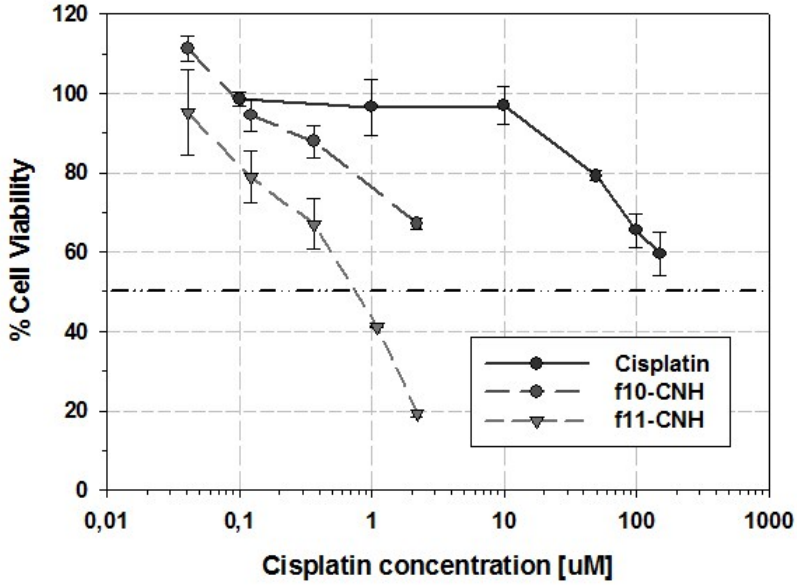

Figure S10. 24 h viability assay on PC-3-PSMA cells treated with cisplatin, ***f10-CNH*** and ***f11-CNH*** after a preincubation step of CNHs with BSA. Mean ± SD data of three separate experiments.

Table S1.

f11-CNH μg/ml	Binding	Uptake
125	5.6±0.1	16.3±1.4
250	6.9±0.2	23.0±2.3

Table S1. Evaluation of binding and uptake of ***f11*-CNH** on LNCaP, $PSMA^+$, cells after incubation for 1 h 30 min at 37°C. MFI values obtained by flow cytometry were normalized to obtain the fluorescent signal gain with respect to the signal of the cells incubated with the secondary antibody FITC- labelled alone (i.e. MFI sample/MFI Gam-FITC; see Experimental Section for more details). Mean ± SD data of three separate experiments.

Table S2.		
f11-CNH μg/ml	Binding	Uptake
125	1.0±0.1	1.4±0.2
250	1.2±0.04	1.5±0.2

Table S2. Evaluation of binding and uptake of ***f11*-CNH** on PC3- WT, $PSMA^-$, cells after incubation for 1 h 30 min at 37°C. MFI values obtained by flow cytometry were normalized to obtain the fluorescent signal gain with respect to the signal of the cells incubated with the secondary antibody FITC- labelled alone (i.e. MFI sample/MFI Gam-FITC; see Experimental Section for more details). Mean ± SD data of three separate experiments.