

*Supporting information*

# Melanoma Cell Reprogramming and Awakening of Antitumor Immunity as a Fingerprint of Hyper-Harmonized Hydroxylated Fullerene Water Complex (3HFWC) and Hyperpolarized Light Application *In Vivo*

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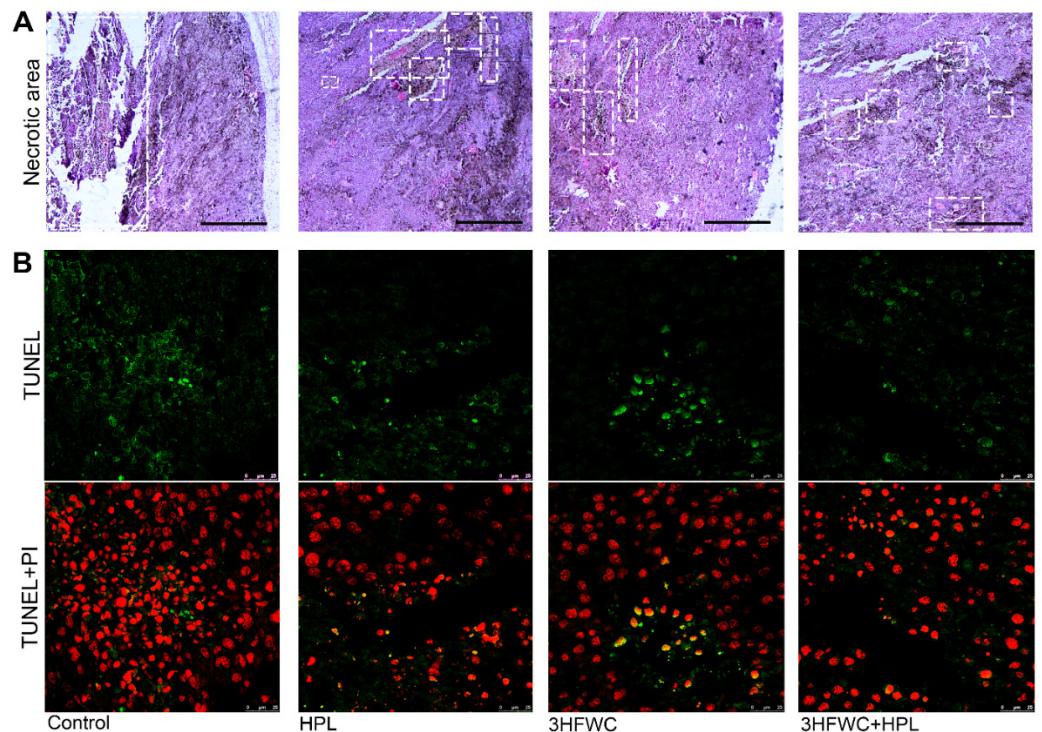
† These authors contributed equally to this work.

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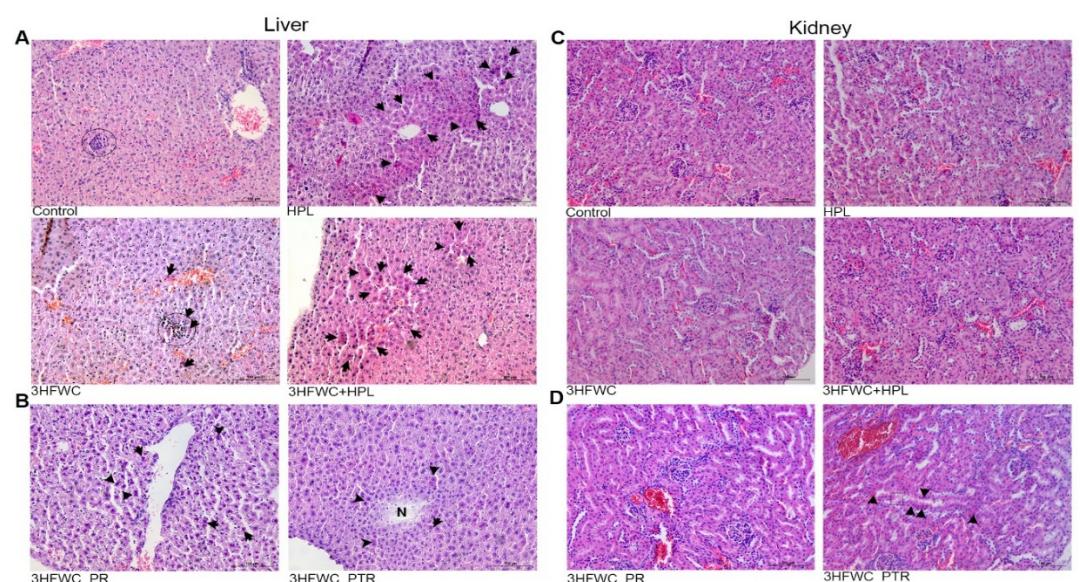
Figure S1. Representative micrographs of tumor necrosis area and TUNEL detection of apoptotic cells in the melanoma tissue from HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma.

Figure S2. Representative micrographs of the most significant histopathological alterations in the liver and kidney cortex of HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma.

Table S1. Biochemical urine parameters of HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma



**Figure S1.** Representative micrographs of **A**) tumor necrosis area (squares), HE staining (scale bar and orig. magnification – 500  $\mu\text{m}$ ,  $\times 5$ ); and **B**) TUNEL detection of apoptotic cells (green signal, alone and merged with red PI signal of nuclei; (scale bar and orig. magnification – 25  $\mu\text{m}$ ,  $\times 63$ ); in the melanoma tissue from HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma.



**Figure S2.** Representative micrographs of the most significant histopathological alterations in the **(A, B)** liver and **(C, D)** kidney cortex of HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma. **A)** Liver tissue of animals treated after the melanoma induction; **B)** liver tissue of animals treated with 3HFWC in prophylactic (PR) and combined (prophylactic+therapeutic, PTR) regimen; **C)** Kidney tissue of animals treated after the melanoma induction; **D)** kidney tissue of animals treated with 3HFWC in PR and PTR. Encircled area – immune cells granulomas; arrowheads – eosinophilic, apoptotic cells; N – necrotic area; square – discontinuation of tubular epithelium. HE staining; scale bar and orig. magnification – 100  $\mu\text{m}$ ,  $\times 10$

**Table S1.** Biochemical urine parameters of HPL, 3HFWC and 3HFWC+HPL-treated mice with syngeneic melanoma.

	<b>Control</b>	<b>3HFWC</b>	<b>HPL</b>	<b>3HFWC + HPL</b>
Spec. gravity	1027 ± 2.7	1028 ± 2.7	1028.3 ± 2.9	1028.3 ± 2.9
pH	5 ± 0	5.2 ± 0.4	5.7 ± 0.6	5 ± 0
Glucose (mmol/L)	5.5 ± 0	5.5 ± 0	5.5 ± 0	5.5 ± 0
Nitrite	negative	negative	negative	negative
Protein (mg/100ml)	40 ± 34.6	76 ± 40.4	10 ± 0	16.7 ± 11.5
Ketones (mg/100ml)	8 ± 2.7	8.3 ± 2.8	8.3 ± 2.9	8.3 ± 2.9
Urobilinogen (mg/100ml)	4.2 ± 2.5	3.0 ± 3.0	4.0 ± 0	2.0 ± 1.7
Bilirubin (mg/100ml)	0.8 ± 0.3	0.4 ± 0.2	0.5 ± 0	0.5 ± 0
Blood (RBC/µl)	negative	negative	negative	negative
Leukocytes (WBC/µl)	negative	negative	negative	negative