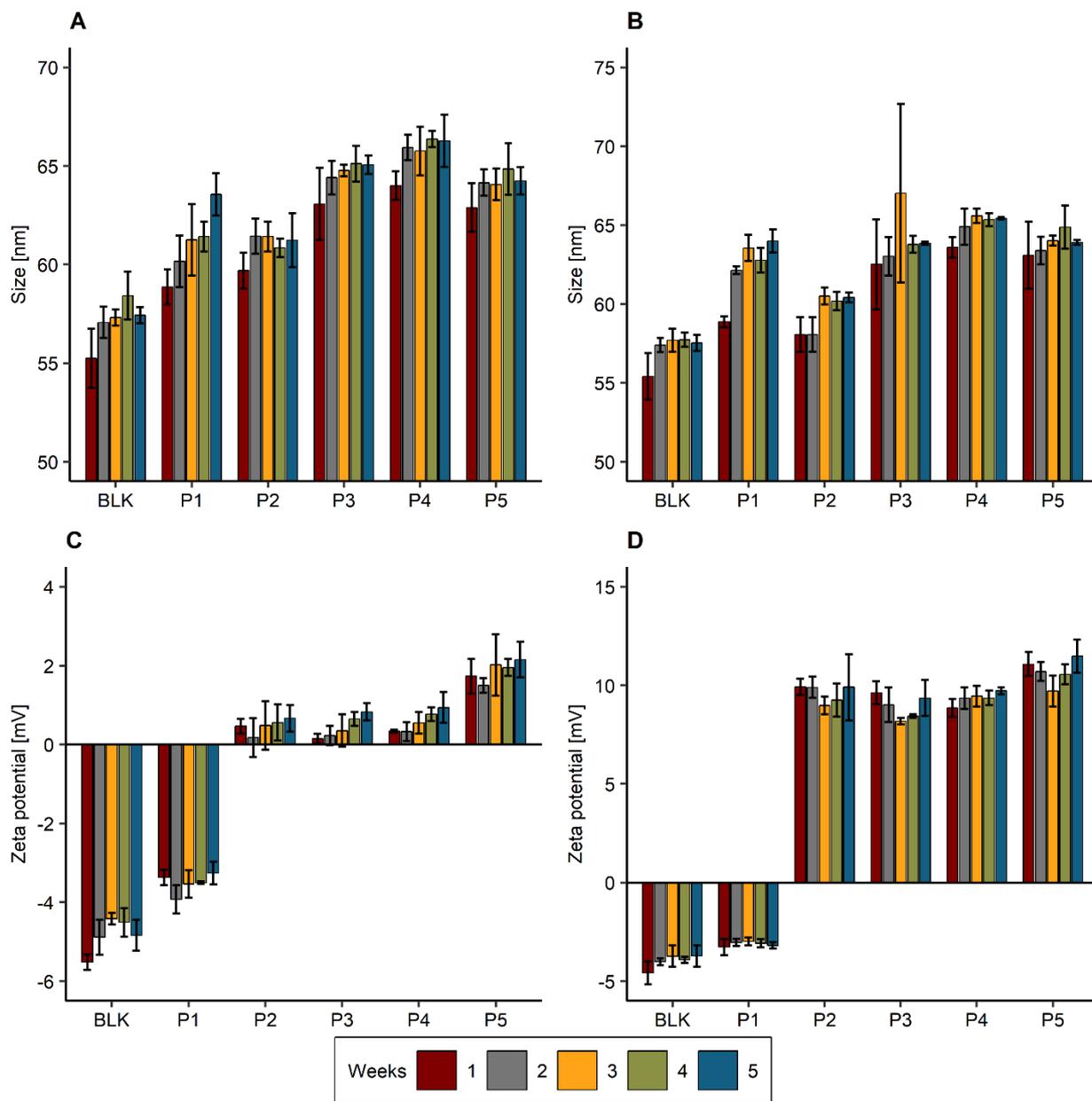
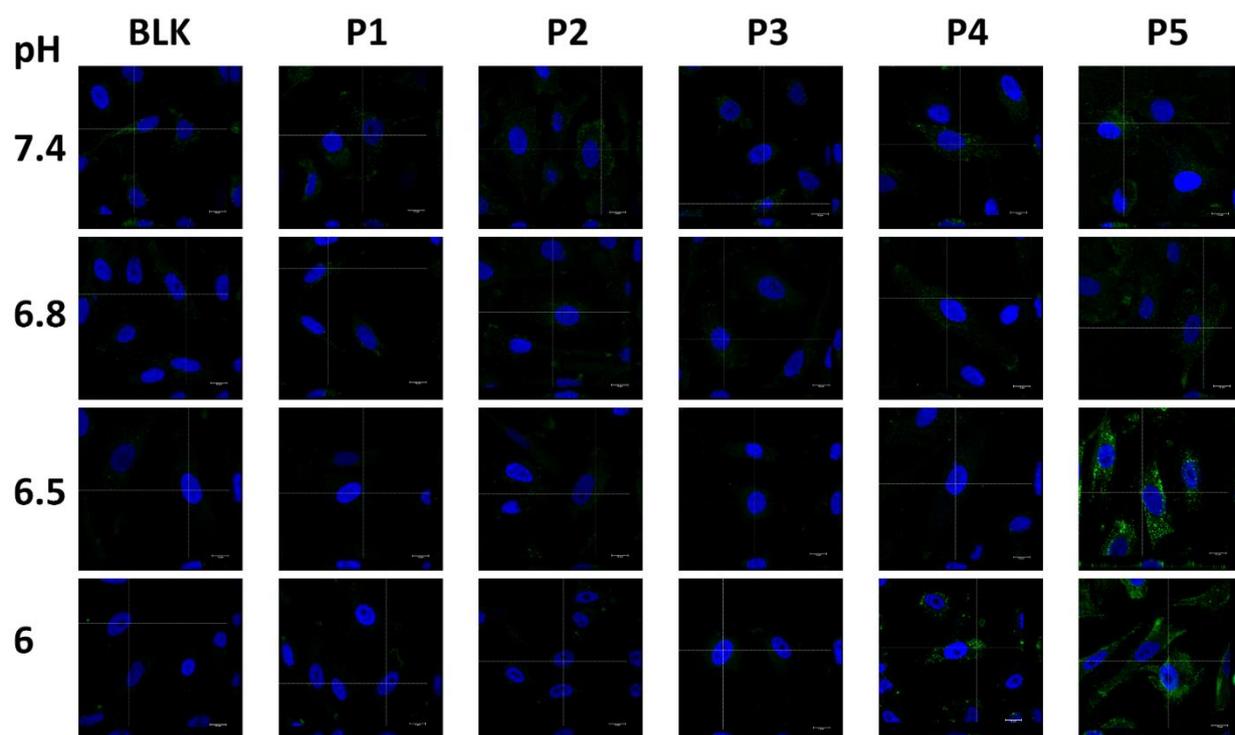


# pH-Responsive Lipid Nanocapsules: A Promising Strategy for Improved Resistant Melanoma Cell Internalization

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**Figure S1.** Stability of Blank LNC ("BLK") and modified LNC with polymer C<sub>18</sub>H<sub>37</sub>-PNVP<sub>49</sub> ("P1"), C<sub>18</sub>H<sub>37</sub>-P(NVP<sub>15</sub>-co-Vim<sub>5</sub>) ("P2"), C<sub>18</sub>H<sub>37</sub>-P(NVP<sub>22</sub>-co-Vim<sub>8</sub>) ("P3"), C<sub>18</sub>H<sub>37</sub>-P(NVP<sub>35</sub>-co-Vim<sub>10</sub>) ("P4") and C<sub>18</sub>H<sub>37</sub>-P(NVP<sub>21</sub>-co-Vim<sub>15</sub>) ("P5"). Stability was assessed by measuring the hydrodynamic diameter (nm) at pH 7.4 (A) and 6 (B), and zeta potential (mV) at pH 7.4 (C) and 6 (D) every week for 4 weeks. Results (n = 3) are expressed as mean measure ± standard deviation \* p < 0.05.



**Figure S2.** Confocal imaging of SK-Mel 28 cells after 2 h of incubation Blank LNC (“BLK”) and LNC post-inserted by  $C_{18}H_{37}-PNVP_{49}$  (“P1”),  $C_{18}H_{37}-P(NVP_{15}-co-Vim_5)$  (“P2”),  $C_{18}H_{37}-P(NVP_{22}-co-Vim_8)$  (“P3”),  $C_{18}H_{37}-P(NVP_{35}-co-Vim_{10})$  (“P4”) and  $C_{18}H_{37}-P(NVP_{21}-co-Vim_{15})$  (“P5”) at pH 7.4, 6.8, 6.5 and 6. Cell nucleus was stained with DAPI (in blue), green signal comes from the fluorescent LNC. Objective used: 63x/NA 1.40 oil with 2x numerical zoom, white lines represent two orthogonal sections used to analyze nanoparticle uptake. Scale bars correspond to 10  $\mu m$ .