



Supplementary Materials

# Dual-Stimuli-Sensitive Smart Hydrogels Containing Magnetic Nanoparticles as Antitumor Local Drug Delivery Systems—Synthesis and Characterization

Adam Kasiński <sup>1</sup>, Agata Świerczek <sup>1</sup>, Monika Zielińska-Pisklak <sup>1</sup>, Sebastian Kowalczyk <sup>2</sup>, Andrzej Plichta <sup>2</sup>, Anna Zgadzaj <sup>3</sup>, Ewa Oledzka <sup>1</sup> and Marcin Sobczak <sup>1,4,\*</sup>

<sup>1</sup> Department of Pharmaceutical Chemistry and Biomaterials, Faculty of Pharmacy, Medical University of Warsaw, Banacha 1 Str., 02-097 Warsaw, Poland

<sup>2</sup> Faculty of Chemistry, Warsaw University of Technology, 3 Noakowskiego Str., 00-664 Warsaw, Poland

<sup>3</sup> Department of Toxicology and Food Science, Faculty of Pharmacy, Medical University of Warsaw, 1 Banacha Str., 02-097 Warsaw, Poland

<sup>4</sup> Military Institute of Hygiene and Epidemiology, 4 Kozielska Str., 01-163 Warsaw, Poland

\* Correspondence: marcin.sobczak@wp.pl or marcin.sobczak@wum.edu.pl

**Table S1.** The results of NRU cytotoxicity tests of PCLA matrices at the highest tested concentration (1 mg/mL).

Sample	Cells viability ± SD [%]
PCLA-A1	97 ± 2
PCLA-A2	107 ± 4
PC	2 ± 3
NC	108 ± 4

PC – positive control, latex 10 mg/mL.

NC – negative control, polyethylene foil 50 mg/mL.




















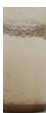


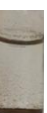
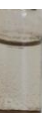










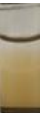



















**Table S2.** The genotoxicity assay results for PCLA matrices at the highest tested concentration (1 mg/mL).

Sample	-S9 <sup>1</sup>		+S9 <sup>2</sup>	
	G ± SD	IR ± SD	G ± SD	IR ± SD
PCLA-A1	1.18 ± 0.18	0.93 ± 0.10	1.24 ± 0.19	0.70 ± 0.14
PCLA-A2	1.12 ± 0.05	0.70 ± 0.22	1.21 ± 0.01	0.72 ± 0.02
Solvent control	1.02 ± 0.03	0.92 ± 0.17	1.00 ± 0.05	0.89 ± 0.09
Positive control	0.74 ± 0.14	12.15 ± 1.31	0.77 ± 0.07	8.41 ± 0.95
Negative control	1.00 ± 0.06	1.00 ± 0.23	1.00 ± 0.06	1.00 ± 0.09

<sup>1</sup> version without metabolic activation

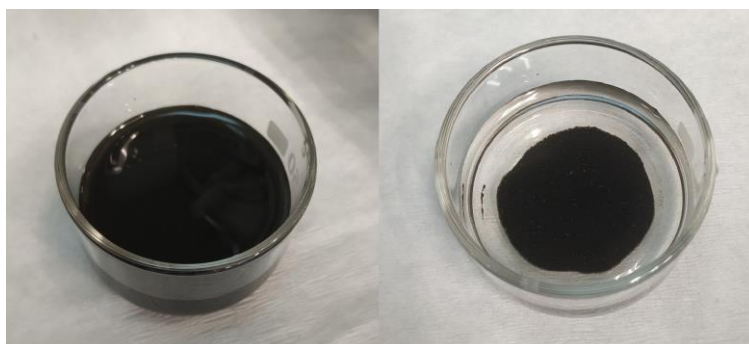
<sup>2</sup> version with metabolic activation

**Table S3.** The visual observation of MIONs sedimentation in water.

Sample	Time					
	0 h	2 h	24 h	48 h	72 h	168 h
S2						
S4						
S5						
S6						
S7						
S8						
S9						
S10						
S11						



**Figure S1.** An illustration photo of the synthesized MIONs.



**Figure S2.** MIONs magnetically-assisted sedimentation.