SUPPORTING INFORMATION

Encapsulation of Amikacin into Microparticles based on Low-Molecular-Weight Poly(lactic Acid) and Poly(lactic acid-co-polyethylene Glycol)

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Description of initial conditions for preparation of the microparticles

2 mL of 0.5% w/v AMI water solution was dispersed in 6 mL of 2% w/v solution of synthesized PLA or PLA-PEG in chloroform under sonication (10 minutes). This primary emulsion was gradually

added into 40 mL of 1% w/v aqueous PVA solution. The mixture was sonicated per 10 minutes and mixed overnight for evaporation of the organic solvent. Microparticles were collected by centrifugation (15 min, 9000 rpm), washed three times with deionized water, frozen and lyophilized.

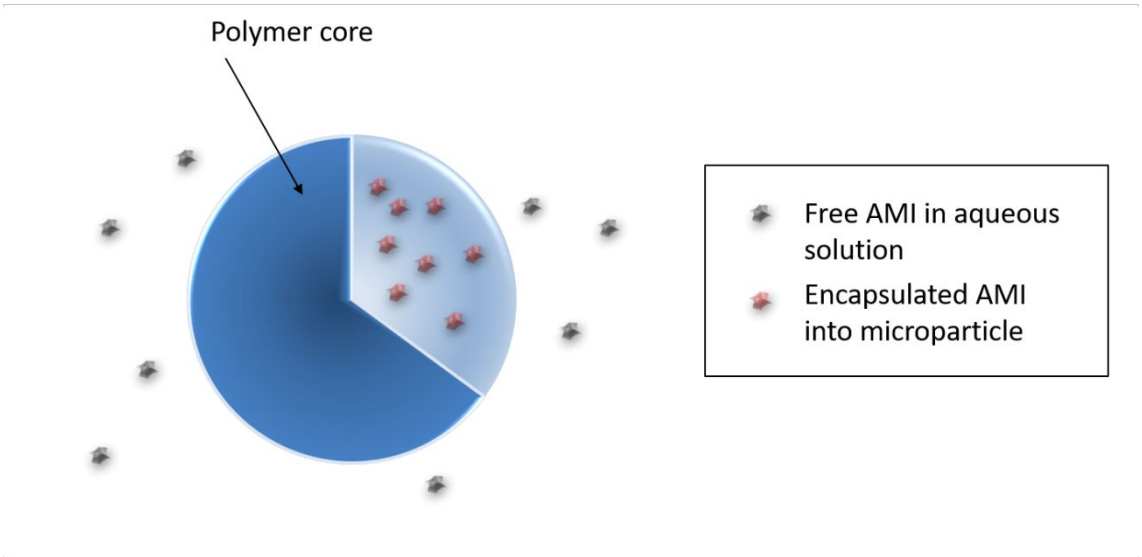

Figure S1. Scheme of amikacin encapsulation.

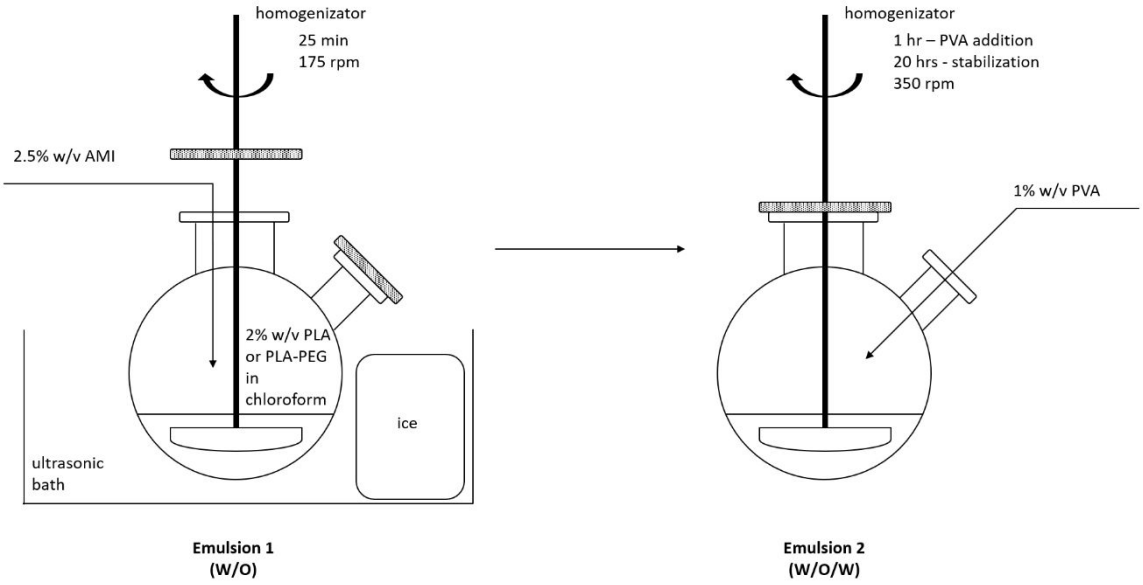

Figure S2. Generalised scheme of microparticles preparation.

Table S1. AMI release form PLA/PVA and PLA-PEG/PVA microparticles (MP). CR and %CR determined using Eq. 1 and 2.

	MP PLA/PVA-AMI			MP PLA-PEG/PVA-AMI		
Time, [min]	%CR ± SD[1], [%]	CR ± SD, [mg AMI/g MP]	CV[2], [%]	%CR ± SD, [%]	CR ± SD, [mg AMI/g MP]	CV, [%]
15	1.50 ± 0.49	0.56 ± 0.18	32.4	2.16 ± 0.30	2.81 ± 0.38	13.7
30	1.59 ± 0.49	0.60 ± 0.18	31.1	2.30 ± 0.33	2.99 ± 0.42	14.2
45	1.66 ± 0.48	0.62 ± 0.18	29.0	2.39 ± 0.34	3.11 ± 0.44	14.1
60 (1 h)	1.73 ± 0.46	0.65 ± 0.17	26.3	2.48 ± 0.35	3.23 ± 0.46	14.2
90 (1.5 h)	1.81 ± 0.44	0.68 ± 0.16	24.1	2.57 ± 0.37	3.35 ± 0.48	14.2
120 (2 h)	1.87 ± 0.45	0.70 ± 0.17	24.0	2.67 ± 0.35	3.47 ± 0.46	13.3
180 (3 h)	1.94 ± 0.44	0.73 ± 0.16	22.5	2.75 ± 0.34	3.58 ± 0.44	12.3
720 (12 h)	2.01 ± 0.42	0.75 ± 0.16	21.1	2.84 ± 0.32	3.69 ± 0.42	11.4
1440 (1 day)	2.05 ± 0.40	0.77 ± 0.15	19.6	2.90 ± 0.31	3.77 ± 0.40	10.7
4320 (3 days)	2.10 ± 0.37	0.79 ± 0.14	17.5	2.98 ± 0.30	3.87 ± 0.38	9.9
5760 (4 days)	2.15 ± 0.33	0.81 ± 0.12	15.2	3.05 ± 0.29	3.97 ± 0.37	9.4
10080 (7 days)	2.20 ± 0.29	0.83 ± 0.11	13.2	3.12 ± 0.28	4.06 ± 0.37	9.1
14400 (10 days)	2.27 ± 0.28	0.85 ± 0.11	12.4	3.18 ± 0.27	4.13 ± 0.35	8.5
20160 (14 days)	2.34 ± 0.27	0.88 ± 0.10	11.6	3.26 ± 0.26	4.23 ± 0.34	8.0
30240 (21 days)	2.44 ± 0.26	0.91 ± 0.10	10.8	3.33 ± 0.25	4.33 ± 0.32	7.4
40320 (28 days)	2.59 ± 0.26	0.97 ± 0.10	10.2	3.53 ± 0.12	4.59 ± 0.16	3.5
60480 (42 days)	2.88 ± 0.26	1.08 ± 0.10	9.1	3.67 ± 0.17	4.77 ± 0.22	4.7
76320 (53 days)	3.18 ± 0.26	1.19 ± 0.10	8.3	3.83 ± 0.18	4.98 ± 0.23	4.6
90720 (63 days)	3.25 ± 0.28	1.22 ± 0.10	8.5	3.99 ± 0.16	5.19 ± 0.21	4.1

[1]SD – 3 independently prepared material samples, analyzed 3 times; [2]CV – variation coefficient