

SUPPLEMENTARY MATERIAL

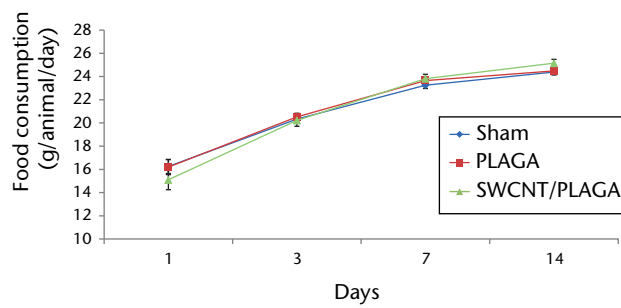


Fig. a

Graph showing the food consumption in rats implanted with Sham, poly (lactic-co-glycolic acid) (PLAGA) and single-walled carbon nanotubes (SWCNT)/PLAGA composites at two weeks post-implantation. Data represent mean with standard error of the mean and $p < 0.05$ was considered significant

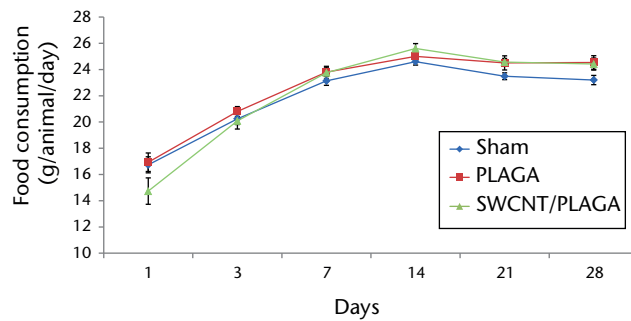


Fig. b

Graph showing the food consumption in rats implanted with Sham, poly (lactic-co-glycolic acid) (PLAGA) and single-walled carbon nanotubes (SWCNT)/PLAGA composites at four weeks post-implantation. Data represent mean with standard error of the mean and $p < 0.05$ was considered significant.

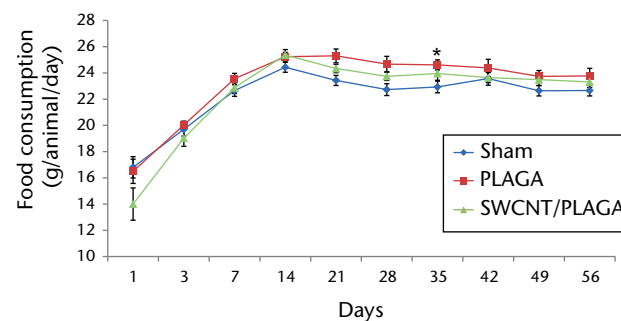


Fig. c

Graph showing the food consumption in rats implanted with Sham, poly (lactic-co-glycolic acid) (PLAGA) and single-walled carbon nanotubes (SWCNT)/PLAGA composites at eight weeks post-implantation. Data represent mean with standard error of the mean and $p < 0.05$ was considered significant. *PLAGA was significantly different from Sham.

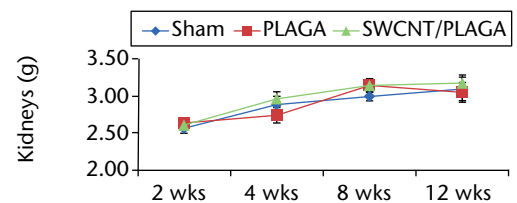
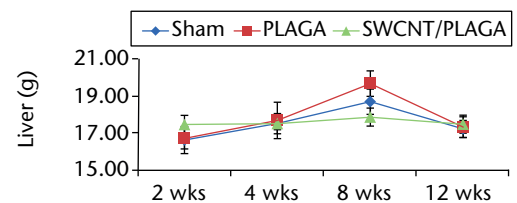
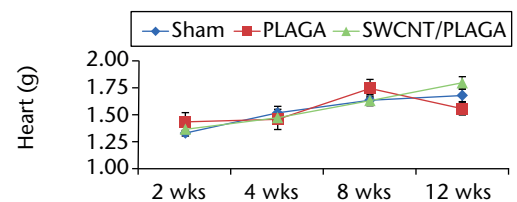
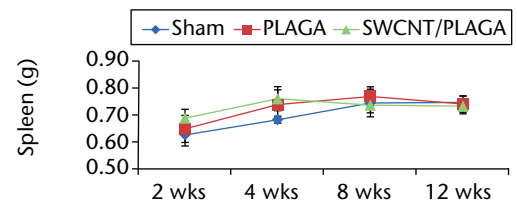
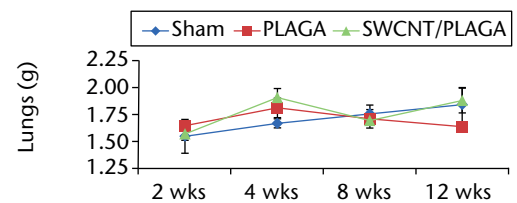
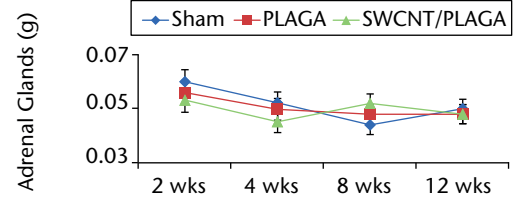
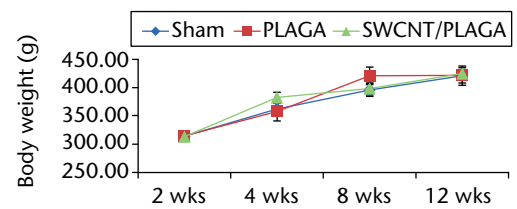


Fig. d

Graphs showing the absolute organ weight in rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single walled carbon nanotubes (SWCNT)/PLAGA composites. The parameters include body weight, adrenal glands, Lungs, spleen, heart, liver and Kidneys. Data represents mean with standard error of mean and $p < 0.05$ was considered significant.

Table I. Urinalysis values of rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single-walled carbon nanotubes (SWCNT)/PLAGA composites at 12 weeks post-implantation

Parameters	Group	Sham (5) [*]	PLAGA (5) [*]	SWCNT/PLAGA(5) [*]
Blood, haemolysed (Ery/ μ l)	ca. 10	-	-	-
	ca. 50	-	-	-
	ca. 250	-	-	-
Blood, non-haemolysed (Ery/ μ l)	Negative	5	5	4
	ca. 5 to 10	-	-	1
	ca. 50	-	-	-
Urobilinogen (mg/dl)	ca.250	-	-	-
	Normal	5	5	5
	2	-	-	-
	4	-	-	-
Bilirubin	8	-	-	-
	12	-	-	-
	Negative	4	4	5
	+	1	1	-
Protein (mg/dl)	++	-	-	-
	+++	-	-	-
	Negative	-	-	-
	30	2	2	1
Nitrite	100	3	3	4
	500	-	-	-
	Negative	5	5	5
	Positive	-	-	-
Ketones	Every pink colour	-	-	-
	Negative	5	5	5
	+	-	-	-
	++	-	-	-
Ascorbic acid	+++	-	-	-
	Negative	1	2	2
	+	4	2	3
Glucose (mg/dl)	++	-	1	-
	Negative	5	5	5
	Normal	-	-	-
	50	-	-	-
	150	-	-	-
	500	-	-	-
pH	≥ 1000	-	-	-
	5	-	-	-
	6	-	-	-
	7	5	5	4
	8	-	-	1
Specific gravity	9	-	-	-
	1	-	-	-
	1.005	3	1	2
	1.01	-	-	2
	1.015	1	2	1
	1.02	1	2	-
	1.025	-	-	-
1.03	-	-	-	
Leucocytes (leuco/ μ l)	Negative	-	-	-
	ca. 25	-	-	-
	ca. 75	1	1	1
	ca.500	4	4	4

*Number of animals examined ca, circa

Table II. Haematological values of rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single walled carbon nanotubes (SWCNT)/PLAGA composites at four weeks post-implantation. Each value represents mean and standard error of the mean (in brackets)

	Sham (5)*	PLAGA (5)*	SWCNT/PLAGA (5)*
WBC (10 ⁹ /l)	7.908 (1.58)	9.57 (0.84)	9.19 (0.57)
LYM (10 ⁹ /l)	6.272 (1.29)	7.596 (0.67)	8.254 (0.63)
MON (10 ⁹ /l)	0.222 (0.12)	0.124 (0.05)	0.114 (0.03)
GRA (10 ⁹ /l)	1.41(0.42)	1.85 (0.17)	0.824 (0.30)
LY% (%)	80.44 (3.43)	79.44 (1.14)	89.8 (3.30)
MO% (%)	2.5 (0.94)	1.18 (0.36)	1.28 (0.34)
GR% (%)	17.04 (4.08)	19.36 (1.25)	8.98 (3.14)
RBC (10 ¹² /l)	8.61 (0.08)	9.032 (0.13)	8.9 (0.04)
HGB (g/dl)	15.84 (0.16)	16.14 (0.17)	16.62 (0.12)
HCT (%)	48.056 (0.57)	49.06 (0.54)	49.798 (0.46)
MCV (fl)	55.8 (0.66)	54.2 (0.58)	56 (0.63)
MCH (pg)	18.4 (0.08)†	17.84 (0.13)	18.68 (0.19)†
MCHC (g/dl)	32.98 (0.22)	32.84 (0.20)	33.38 (0.19)
RDWc (%)	15.78 (0.17)	16 (0.25)	15.88 (0.18)
PLT (10 ⁹ /l)	664.2 (29.27)	736.4 (43.08)	683.8 (30.53)
PCT (%)	0.508 (0.02)	0.546 (0.03)	0.522 (0.02)
MPV (fl)	7.66 (0.09)	7.44 (0.09)	7.64 (0.10)
PDWc (%)	30.6 (0.19)	29.96 (0.15)	30.9 (0.25)

*Number in parentheses represents the number of animals examined.

† Sham and SWCNT/PLAGA were significantly different from PLAGA.

WBC, white blood cells; LYM, lymphocytes; MON, monocyte; GRA, granulocytes; LY%, lymphocytes percentage; MO%, monocyte percentage; GR%, granulocyte percentage; RBC, red blood cells; HGB, haemoglobin; HCT, haematocrit; MCV, mean corpuscular volume; MCH, mean corpuscular haemoglobin; MCHC, mean corpuscular haemoglobin concentration; RDWc, red cell distribution width; PLT, platelet count; PCT, procalcitonin; MPV, mean platelet volume; PDWc, platelet distribution width
p < 0.05 was considered significant.

Table III. Haematological values of rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single-walled carbon nanotubes (SWCNT)/PLAGA composites 12 weeks post-implantation. Each value represents mean and standard error of the mean (in brackets)

	Sham (5)*	PLAGA (5)*	SWCNT/PLAGA (5)*
WBC (10 ⁹ /l)	4.548; 0.90	6.546; 1.50	5.838; 1.24
LYM (10 ⁹ /l)	3.536; 0.68	5.402; 1.18	4.98; 1.13
MON (10 ⁹ /l)	0.046; 0.01	0.138; 0.05	0.174; 0.09
GRA (10 ⁹ /l)	0.966; 0.23	1.006; 0.29	0.684; 0.07
LY% (%)	78.14; 1.20	83.1; 1.82	84.08; 1.81
MO% (%)	1.12; 0.34	1.9; 0.51	2.42; 0.86
GR% (%)	20.72; 1.09†	15; 1.65	13.5; 2.51
RBC (10 ¹² /l)	8.934; 0.18	8.896; 0.17	8.984; 0.19
HGB (g/dl)	15.98; 0.28	16.24; 0.08	16.3; 0.19
HCT (%)	46.902; 1.10	46.9; 0.55	46.684; 0.66
MCV (fl)	52.8; 0.49	53; 0.89	52.4; 0.87
MCH (pg)	17.88; 0.14	18.3; 0.35	18.18; 0.21
MCHC (g/dl)	34.08; 0.40	34.6; 0.30	35; 0.33
RDWc (%)	16.84; 0.10	16.64; 0.18	16.52; 0.23
PLT (10 ⁹ /l)	648.2; 65.05	553.774; 140.93	657.2; 19.67
PCT (%)	0.494; 0.05	0.504; 0.04	0.502; 0.02
MPV (fl)	7.64; 0.07	7.78; 0.16	7.62; 0.08
PDWc (%)	30.48; 0.27	31.3; 0.33	30.78; 0.41

*Number of animals examined

†Sham was significantly different from SWCNT/PLAGA

p < 0.05 was considered significant

WBC, white blood cells; LYM, lymphocytes; MON, monocyte; GRA, granulocytes; LY%, lymphocytes percentage; MO%, monocyte percentage; GR%, granulocyte percentage; RBC, red blood cells; HGB, haemoglobin; HCT, haematocrit; MCV, mean corpuscular volume; MCH, mean corpuscular haemoglobin; MCHC, mean corpuscular haemoglobin concentration; RDWc, red cell distribution width; PLT, platelet count; PCT, procalcitonin; MPV, mean platelet volume; PDWc, platelet distribution width.

Table IV. Haematological values of rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single walled carbon nanotubes (SWCNT)/PLAGA composites at two weeks post-implantation. Each value represents mean and standard error of the mean (in brackets)

	Sham (5)*	PLAGA (5)*	SWCNT/PLAGA (5)*
WBC (10 ⁹ /l)	9.258 (1.81)	8.988 (1.20)	11.074 (0.72)
LYM (10 ⁹ /l)	7.556 (1.48)	6.678 (0.88)	8.964 (0.59)
MON (10 ⁹ /l)	0.264 (1.12)	0.158 (0.06)	0.32 (0.10)
GRA (10 ⁹ /l)	1.436 (0.34)	2.154 (0.36)	1.79 (0.10)
LY% (%)	81.46 (3.09)	74.3 (1.41)	80.9 (0.96)
MO% (%)	2.68 (1.02)	1.6 (0.61)	2.72 (0.69)
GR% (%)	15.86 (3.24)	24.06 (1.96)	16.36 (1.20)
RBC (10 ¹² /l)	8.4 (0.12)	8.314 (0.24)	8.264 (0.15)
HGB (g/dl)	15.52 (0.38)	15.22 (0.64)	15.82 (0.35)
HCT (%)	47.154 (0.25)	45.418 (1.02)	46.072 (0.84)
MCV (fl)	56.2 (0.66)	54.6 (0.60)	55.6 (0.87)
MCH (pg)	18.5 (0.32)	18.28 (0.36)	19.16 (0.20)
MCHC (g/dl)	32.92 (0.77)	33.46 (0.75)	34.34 (0.25)
RDWc (%)	16.68 (0.09)	16.4 (0.12)	16.46 (0.29)
PLT (10 ⁹ /l)	435.6 (86.19)	523.6 (126.94)	506 (91.27)
PCT (%)	0.344 (0.06)	0.374 (0.09)	0.376 (0.07)
MPV (fl)	8.36 (0.56)	7.54 (0.42)	7.48 (0.04)
PDWc (%)	32.8 (1.72)	31.46 (1.18)	30.14 (0.51)

*Number of animals examined

p < 0.05 was considered significant

WBC, white blood cells; LYM, lymphocytes; MON, monocyte; GRA, granulocytes; LY%, lymphocytes percentage; MO%, monocyte percentage; GR%, granulocyte percentage; RBC, red blood cells; HGB, haemoglobin; HCT, haematocrit; MCV, mean corpuscular volume; MCH, mean corpuscular haemoglobin; MCHC, mean corpuscular haemoglobin concentration; RDWc, red cell distribution width; PLT, platelet count; PCT, procalcitonin; MPV, mean platelet volume; PDWc, platelet distribution width

Table V. Haematological values of rats implanted with Sham, poly(lactic-co-glycolic acid) (PLAGA) and single walled carbon nanotubes (SWCNT)/PLAGA composites at eight weeks post-implantation. Each value represents mean and standard error of the mean (in brackets)

	Sham (5)*	PLAGA (5)*	SWCNT/PLAGA (5)*
WBC (10 ⁹ /l)	6.672 (1.13)	7.08 (0.85)	5.136 (0.38)
LYM (10 ⁹ /l)	5.194 (0.68)	5.706 (0.50)	4.162 (0.36)
MON (10 ⁹ /l)	0.132 (0.05)	0.202 (0.03)	0.062 (0.01)
GRA (10 ⁹ /l)	1.342 (0.53)	1.17 (0.36)	0.91 (0.09)
LY% (%)	80.1 (3.88)	81.9 (2.87)	80.8 (1.61)
MO% (%)	2.42 (0.92)	2.88 (0.56)	1.32 (0.32)
GR% (%)	17.5 (4.58)	15.22 (3.17)	17.86 (1.65)
RBC (10 ¹² /l)	8.782 (0.21)	9.208 (0.14)	8.774 (0.09)
HGB (g/dl)	16.26 (0.31)	16.64 (0.12)	15.96 (0.20)
HCT (%)	47.806 (1.01)	49.518 (0.84)	47.198 (0.75)
MCV (fl)	54.6 (0.75)	53.8 (0.58)	53.6 (0.51)
MCH (pg)	18.56 (0.18)	18.1 (0.19)	18.2 (0.08)
MCHC (g/dl)	34.04 (0.46)	33.62 (0.42)	33.84 (0.35)
RDWc (%)	15.78 (0.16)	15.88 (0.18)	16.38 (0.09)
PLT (10 ⁹ /l)	730 (112.88)	757.6 (36.24)	723.8 (25.42)
PCT (%)	0.62 (0.12)	0.584 (0.03)	0.564 (0.02)
MPV (fl)	8.4 (0.37)	7.68 (0.06)	7.78 (0.18)
PDWc (%)	32.12 (0.79)	30.58 (0.35)	30.8 (0.29)

*Number of animals examined

p < 0.05 was considered significant

WBC, white blood cells; LYM, lymphocytes; MON, monocyte; GRA, granulocytes; LY%, lymphocytes percentage; MO%, monocyte percentage; GR%, granulocyte percentage; RBC, red blood cells; HGB, haemoglobin; HCT, haematocrit; MCV, mean corpuscular volume; MCH, mean corpuscular haemoglobin; MCHC, mean corpuscular haemoglobin concentration; RDWc, red cell distribution width; PLT, platelet count; PCT, procalcitonin; MPV, mean platelet volume; PDWc, platelet distribution width