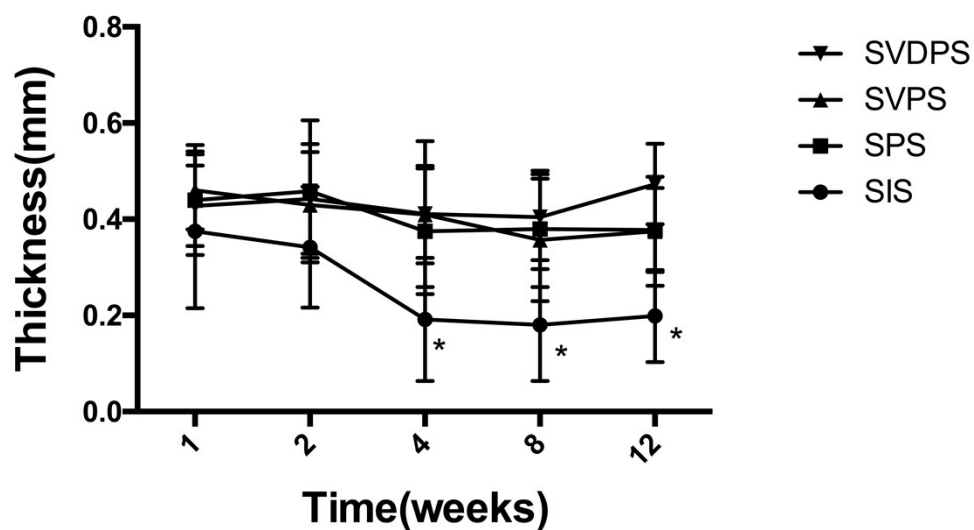


Promoting early neovascularization of SIS-repaired abdominal wall by controlled releasing bioactive VEGF

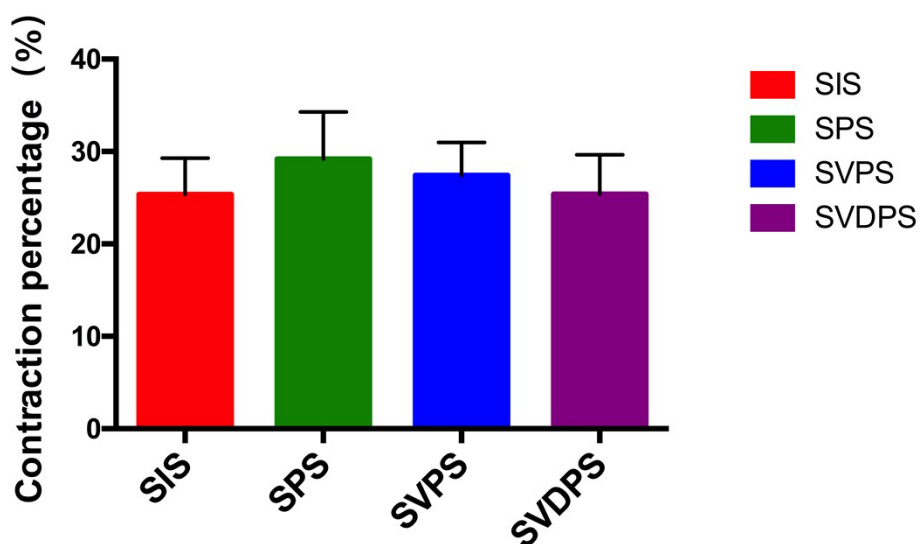
Rui Tang, Xin Wang, Hanying Zhang, Xi Liang, Xueyi Feng, Xiaoqiang Zhu, Xinwu Lu, Fei Wu, Zhengni Liu

Supplemental Figure 1



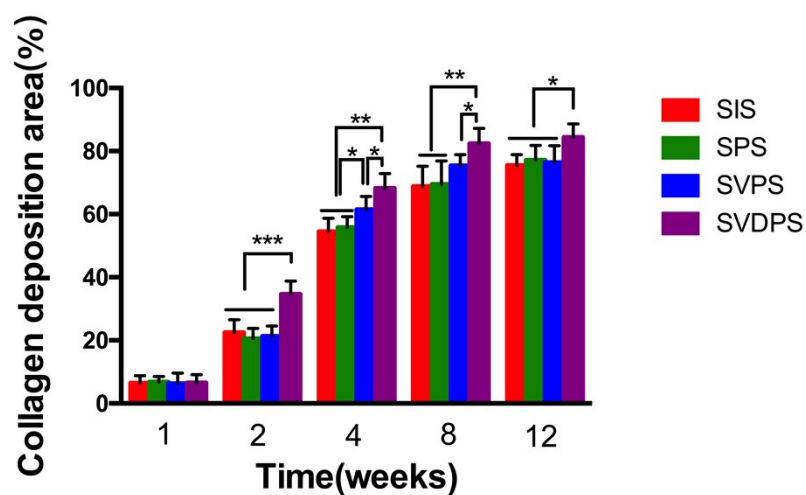
Supplemental Figure 1. The thickness of SVDPS, SVPS, SPS and SIS implants during the course of the experiment.

Supplemental Figure 2



Supplemental Figure 2. The surface contraction of SVDPS, SVPS, SPS and SIS implants during the course of the experiment.

Supplemental Figure 3



Supplemental Figure 3. The collagen deposition of SVDPS, SVPS, SPS and SIS implants during the course of the experiment. * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ compared with SVDPS group.

Supplemental Table 1. Mechanical properties of SIS, SPS, SVPS and SVDPS 1 week after implantation

Group	n	Max load (N)	Young's modulus (MPa)	Tensile strength (MPa)	Stiffness (N/mm)
SIS	4	1.80 ± 0.29	3.39 ± 0.44	1.96 ± 0.89	1.49 ± 0.47
SPS	4	1.94 ± 0.48	3.64 ± 0.79	2.01 ± 0.56	1.57 ± 0.38
SVPS	4	2.09 ± 0.63	3.44 ± 1.29	1.93 ± 0.98	1.58 ± 0.27
SVDPS	4	2.33 ± 0.74	3.52 ± 0.74	2.17 ± 0.53	1.69 ± 0.36

Supplemental Table 2. Mechanical properties of SIS, SPS, SVPS and SVDPS 2 weeks after implantation

Group	n	Max load (N)	Young's modulus (MPa)	Tensile strength (MPa)	Stiffness (N/mm)
SIS	4	3.51 ± 0.80***	4.33 ± 0.72	2.17 ± 0.90	2.82 ± 0.75
SPS	5	4.09 ± 0.35**	3.90 ± 1.26	2.08 ± 1.13	2.93 ± 0.56

SVPS	6	4.12±0.73**	4.24±0.93	2.25±0.57	3.14±0.67
SVDPS	5	6.43±0.49	4.78±1.42	2.42±0.82	3.27±0.72

*p<0.05, **p<0.01, ***p<0.001, ****p<0.0001 compared with SVDPS group.

Supplemental Table 3. Mechanical properties of SIS, SPS, SVPS and SVDPS 4 weeks after implantation

Group	n	Max load (N)	Young's modulus (MPa)	Tensile strength (MPa)	Stiffness (N/mm)
SIS	4	7.29±1.48	5.28±2.11**	2.87±0.78*	3.88±0.85
SPS	6	8.10±1.35	6.82±0.92	3.02±0.62*	3.90±0.67
SVPS	5	7.41±0.85	7.14±1.66	3.14±0.87	4.30±0.99
SVDPS	5	8.71±0.71	9.28±2.24	4.47±0.78	5.19±1.48

*p<0.05, **p<0.01 compared with SVDPS group.

Supplemental Table 4. Mechanical properties of SIS, SPS, SVPS and SVDPS 8 weeks after implantation

Group	n	Max load (N)	Young's modulus (MPa)	Tensile strength (MPa)	Stiffness (N/mm)
SIS	4	11.98±1.15	5.71±1.56****	3.28±0.35*	4.38±1.18****
SPS	5	11.82±0.08	8.23±1.91**	3.53±0.92	5.99±2.14*
SVPS	4	11.98±1.31	9.44±1.38#	3.32±1.20*	6.43±1.64
SVDPS	5	12.29±1.56	12.13±2.20	4.87±1.22	8.25±1.67

*p<0.05, **p<0.01, ****p<0.0001 compared with SVDPS group.

#p<0.05 compared with SIS group.

Supplemental Table 5. Mechanical properties of SIS, SPS, SVPS and SVDPS 12 weeks after implantation

Group	n	Max load (N)	Young's modulus (MPa)	Tensile strength (MPa)	Stiffness (N/mm)
SIS	4	12.49±1.53	6.37±1.88****	2.42±0.71**	4.76±1.12****
SPS	4	11.85±1.27	9.03±2.16*	2.62±1.14	6.49±1.78*
SVPS	6	12.84±1.35	10.44±2.33##	3.29±0.60*	6.88±1.25*,#
SVDPS	6	13.85±1.28	12.71±3.33	4.40±1.08	8.67±1.32

*p<0.05, **p<0.01, ****p<0.0001 compared with SVDPS group.

p<0.05, ##p<0.01 compared with SIS group.