

Supporting Information for:

Novel dextran-based tube-guides for the regeneration of the rat sciatic nerve after neurotmesis injury

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Table S1: Motor Performance assessment (Motor Deficit determined from the Extensor Postural Thrust - EPT) over the 20 weeks recovery period (T1-T20). Results presented as mean ± SEM.

Motor Deficit (from EPT - %)	Recovery time (weeks)										
	T0	T1	T3	T5	T7	T9	T11	T13	T15	T17	T20
UC	5.37±0.50										
NG	5.75±1.93	89.00±2.16	89.25±2.02	85.00±3.11	77.00±0.71	73.25±3.33	63.50±3.33	59.00±4.49	51.25±3.54	54.50±1.66	52.50±0.96
EtE	7.20±0.20	90.00±0.95	85.60±1.95	79.20±3.37	76.60±2.71	69.20±3.77	59.00±2.81	52.40±3.54	40.60±2.56	39.20±1.50	44.00±2.45
NT	4.11±0.42	70.33±3.78	90.50±2.20	71.50±6.19	76.17±7.19	45.00±6.87	53.83±5.46	62.67±7.74	73.00±3.03	43.00±0.82	63.60±1.36
PT	4.33±0.40	82.40±3.41	92.60±1.66	75.40±8.86	71.60±12.36	50.75±2.87	55.00±1.49	63.40±6.01	63.50±3.43	68.00±4.12	60.00±4.65

Table S2: Nociceptive function assessment (withdrawal reflex time - WRL) over the 20 weeks recovery period (T1-T20). Results presented as mean ± SEM. (NT: non-porous tube-guide; PT: porous tube-guide; NG: nerve graft; EtE: End-to-End suture; UC: uninjured control – baseline prior to injury).

Nociceptive Function (WRL - s)	Recovery time (weeks)										
	T0	T1	T3	T5	T7	T9	T11	T13	T15	T17	T20
UC	4.29±0.20										
NG	4.53±0.57	12.00±-	10.14±1.86	11.50±0.51	10.67±1.33	10.83±1.17	11.16±0.64	9.81±1.42	10.46±0.89	9.92±0.91	9.68±0.94
EtE	4.28±0.38	12.00±-	11.85±0.15	10.22±1.12	10.45±0.95	8.78±0.99	10.48±1.28	9.26±1.37	8.57±0.44	9.82±0.90	7.50±0.39
NT	4.11±0.42	12.00±-	10.17±0.65	9.11±1.29	9.34±1.34	10.07±1.16	9.00±1.13	9.89±0.95	7.61±0.60	6.33±0.51	7.89±1.01
PT	4.33±0.40	12.00±-	9.27±0.83	9.13±1.34	10.08±0.95	8.00±0.76	8.20±0.86	9.67±0.84	6.87±1.06	8.22±0.80	5.59±0.21

Table S3 Functional recovery through the Static Sciatic Index (SSI) over the 20 weeks recovery period (T1-T20). Results presented as mean ± SEM. (NT: non-porous tube-guide; PT: porous tube-guide; NG: nerve graft; EtE: End-to-End suture; UC: uninjured control – baseline prior to injury).

Functional Recovery (SSI)	Recovery time (weeks)										
	T0	T1	T3	T5	T7	T9	T11	T13	T15	T17	T20
UC	-6.34±1.90										
NG	-6.29±0.80	-56.46±14.05	-52.18±19.47	-63.81±9.53	-59.79±5.50	-75.56±5.23	-53.15±7.72	-64.53±6.07	-67.22±6.08	-57.95±4.15	-52.07±4.88
EtE	-5.78±5.77	-44.21±6.86	-33.72±7.03	-73.92±3.94	-70.22±3.72	-52.47±15.84	-68.04±6.36	-41.91±12.28	-46.56±8.39	-43.04±7.11	-59.97±1.52
NT	-5.45±3.48	-49.93±5.22	-54.88±5.96	-50.65±14.29	-42.70±9.95	-56.74±6.97	-45.28±6.14	-33.83±7.81	-48.87±9.48	-42.60±8.07	-38.87±20.60
PT	-8.00±3.95	-29.32±5.28	-58.37±6.63	-24.43±14.07	-40.19±5.47	-42.73±4.65	-38.04±4.32	-33.36±8.09	-47.12±6.76	-21.63±12.56	-19.12±12.12