Electronic Supplementary Material

Spatiotemporal alteration of phospholipids and prostaglandins in a rat model of spinal cord injury

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**Fig. S1:** Experimental procedure employing MALDI-IMS and LC-ESI-MS/MS for analysis of lipid alterations in the spinal cord of rats with SCI

Dissected rat spinal cords with/without SCI treatment were sectioned into 4 tissue blocks along the proximal to distal side and stored at –80°C. For IMS, each frozen block was thinly sliced in a cryo-chamber, and residual blocks were used for LC-ESI-MS/MS. The spatial lipid alterations at different tissue positions and time points after-SCI were examined by IMS. The relative abundance of phospholipids and absolute abundances of PGs were quantified by LC-ESI-MS/MS analysis of lipids extracts from the tissue blocks.
**Fig. S2:** Shown are semi-quantification data from IMS dataset, for each PC and LPC species between normal and sham-operated sample (at 1 day after treatment). Only for LPC(16:0) showed significant change. (Student’s t-test, n = 3). Error bars, S.E.
**Fig. S3:** Temporal elevation of LPC species at 1–2 weeks after SCI

The IMS results and semi-quantification data for LPC (16:0) and LPC (18:0) at the impact site are shown, demonstrating the SCI stage-specific increase in LPC. p value; (Student’s t test, normal vs. each stage group, n = 3). Error bars, S.E.