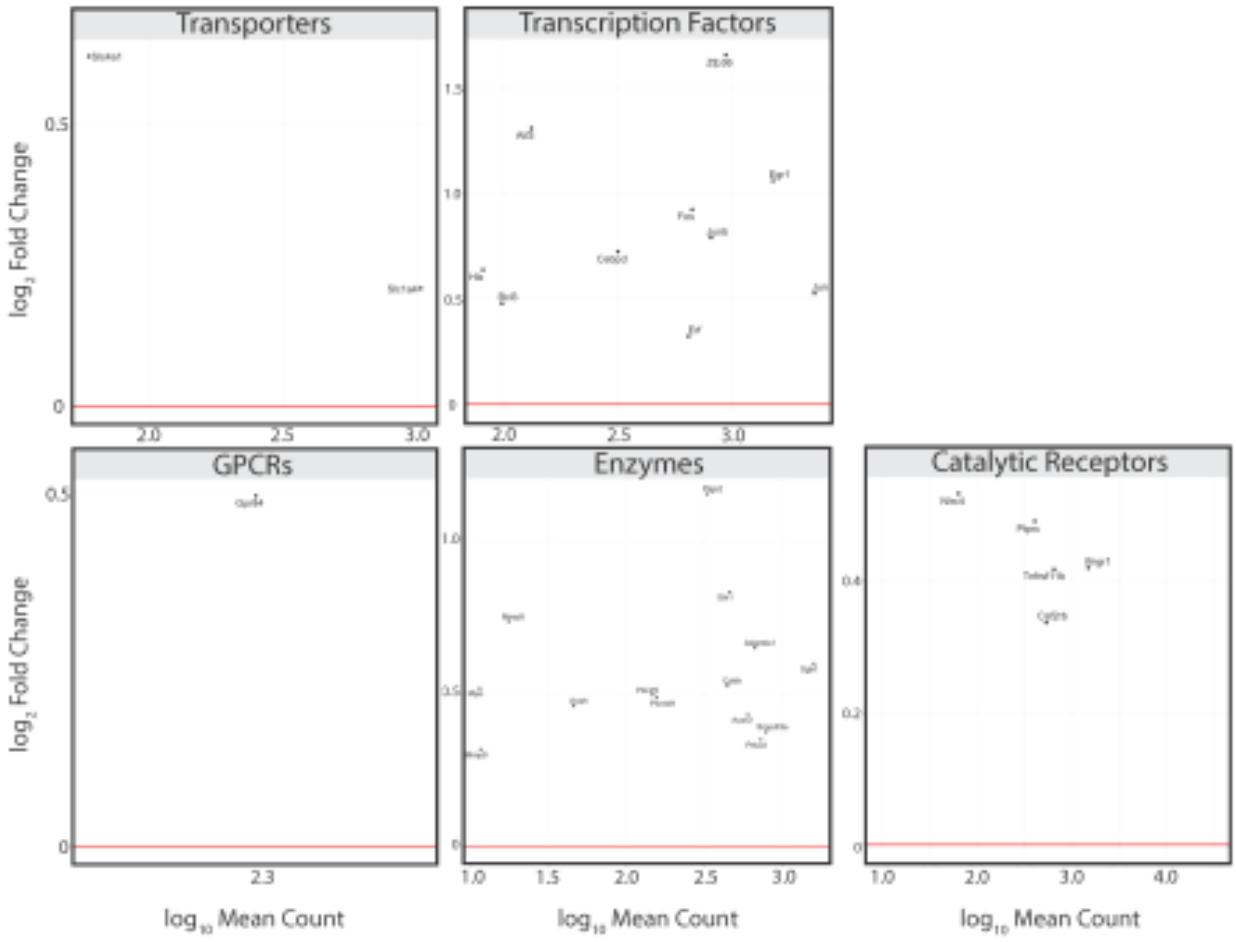
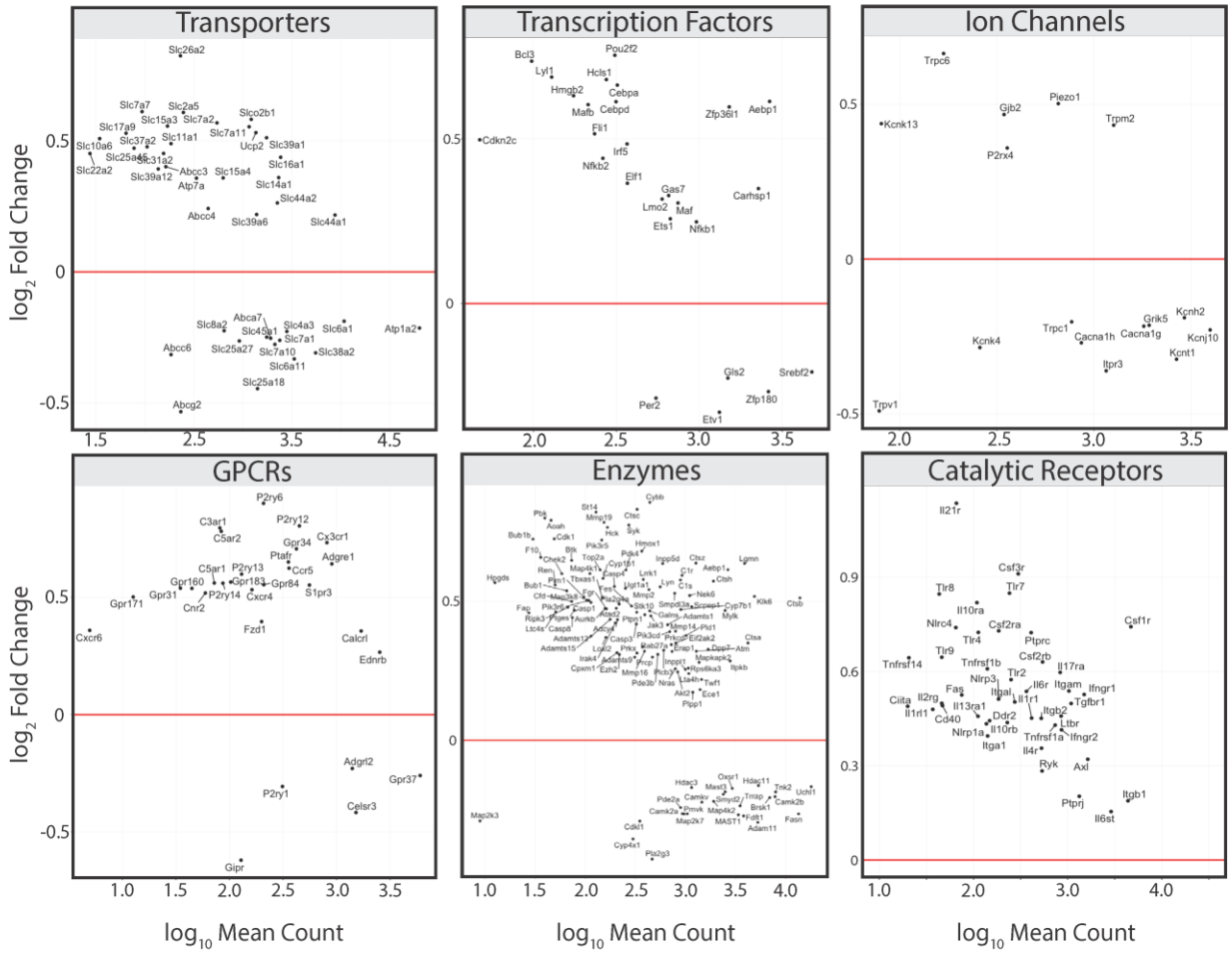
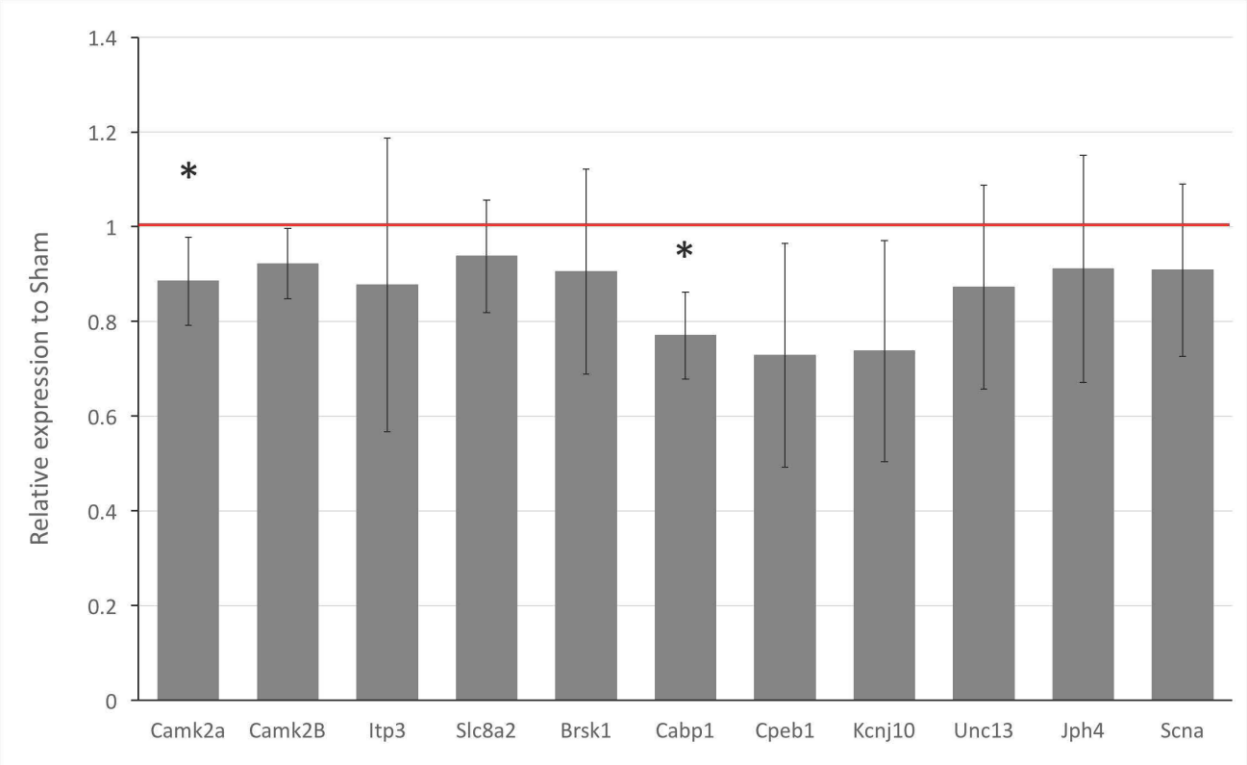


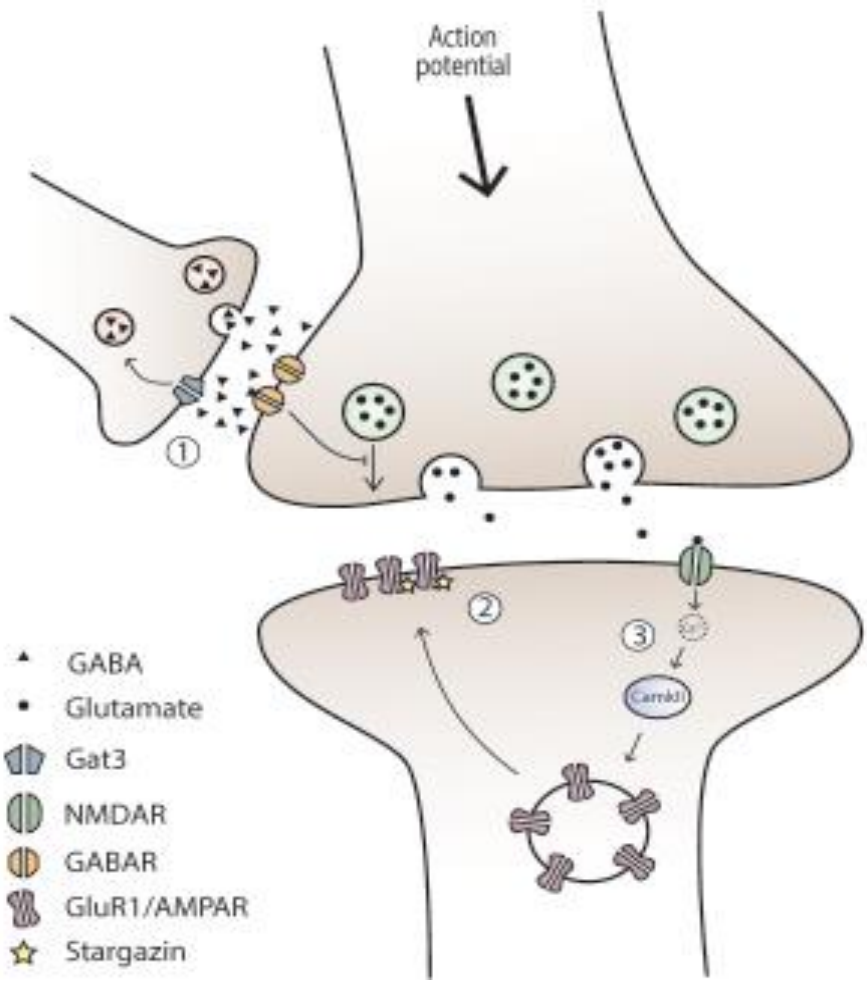
Supplemental figure 1. Differentially expressed genes by gene class in the spinal cord of naïve rats and sham SCS + paclitaxel rats. Fifty-seven of the 121 differentially expressed genes (FDR < 0.05) were assigned gene classes (i.e., transporters, enzymes, G protein-coupled receptors, ion channels, catalytic receptors, transcription factors) as defined by IUPHAR. Figure 4C of the main text shows a bar chart (top) and heatmap (bottom) of the relative difference in expression of genes within each class. Plotted here are a series of scatterplots that identify the mean normalized expression level of each gene and its fold change after paclitaxel (i.e., positive log_2FC values indicate increased expression) for genes assigned to each gene class. Red line indicates no change between groups.



Supplemental figure 2. Differentially expressed genes by gene class in spinal cord of SCS + paclitaxel rats and sham SCS + paclitaxel rats. Of the 1,066 differentially expressed genes (FDR < 0.05), 294 were assigned gene classes (i.e., transporters, enzymes, G protein-coupled receptors, ion channels, catalytic receptors, transcription factors) as defined by IUPHAR. Figure 4C of the main text shows a bar chart (top) and heatmap (bottom) of the relative difference in expression of genes within each class. Plotted here are a series of scatterplots that identify the mean normalized expression level of each gene and its fold change after SCS (i.e., positive log_2FC values indicate increased expression) for genes assigned to each gene class. Red line indicates no change between groups.



Supplemental figure 3. Quantitative real-time PCR validation of the relative changes of 11 genes in the spinal cord of paclitaxel + SCS rats (n=6), as compared to that of paclitaxel + Sham SCS rats (sham, n=5). *Sdha* was used as an endogenous control. Data are expressed as mean ± SD (**P* < 0.05, 2-tailed Student's t-test).



Supplemental figure 4. Hypothetical diagram of spinal cord stimulation (SCS) downregulating key genes related to synaptic plasticity. (1) Glial transporters (GAT-3) may regulate extracellular levels of GABA and the subsequent GABA synaptic activity. (2) Cacng2 (Stargazin) is involved in the transportation of AMPA receptors (AMPARs) to the synaptic membrane and the positive regulation of their rate of activation. (3) CamKIIa and CamKIIb subunits of CamKII (calcium/calmodulin-dependent protein kinase II) increase the number of synaptic AMPARs through fusion of AMPAR-containing vesicles with the plasma membrane, thereby enhancing AMPAR-mediated transmission. AMPA = α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid; GABA = γ-aminobutyric acid; GluR1 = glutamate receptor subunit 1. NMDA = N-methyl-D-aspartate.