

Wiring the *C. elegans* motor circuit: Turning off the wrong genes to make the right connections.

Alternative neural fates in developing motor circuits are distinguished by differential transcriptional repression. Here we present examples of this mechanism in the nematode *C. elegans*, a model organism with a simple well-defined nervous system and facile genetics. We have used cell-specific profiling methods to identify targets of transcriptional repressor proteins that regulate synaptic specificity and neuronal polarity. This approach has revealed a role for Wnt signaling in synaptic choice and uncovered a broad array of molecules that govern developmentally regulated remodeling of motor neuron polarity.