Simple forms of cerebellum-dependent motor learning, such as eyeblink conditioning (EBC), are good models to investigate how intelligent behaviour emerges from an identified neural network. Studies have shown that normal function within both cerebellar cortex and cerebellar nuclei is essential for the acquisition and expression of EBC learning but reversible inactivations of the cortical and nuclear control regions have revealed that consolidation and storage of this motor memory is essentially cortical.

I will present data showing that the noradrenaline system provides an important consolidation signal for cerebellum-dependent learning in the two hours following training, and that the essential mechanism involves $\beta_1$-adrenoceptors on Purkinje cells.