Viral packaging and transduction of adult hippocampal neural progenitors.

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Authors: Joseph Peltier, David V Schaffer

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Public Summary:

Scientific Abstract:
Genetic manipulation of adult hippocampal neural progenitor cells is a useful technique for exploring gene function through gain of function and loss of function mutations or RNAi. Furthermore, the introduction of new genes can "re-program" progenitor cell behavior to force a desired lineage in signaling environments that are not normally permissive for that cell fate. Additionally, by using a systems biology approach, neural progenitors can even be taught new behaviors and responses to signaling. In this chapter, we describe protocols for retroviral and lentiviral packaging and transduction of progenitors. These techniques are important for studying the role of various genes in progenitor fate choice.