

In vivo analysis of engrafted adult hippocampal neural progenitors.

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Public Summary:

Scientific Abstract:

A neural degenerative disease is characterized by the deterioration of neural tissue and subsequent loss of function. The in vivo engraftment of neural stem cells is a promising approach to the functional replacement of neural tissue with the ultimate goal of regaining lost function. In addition, by studying the behavior of engrafted neural stem cells in healthy and diseased tissue, insight can be gained into the extracellular and intracellular mechanisms which regulate stem cell behavior in vivo. Adult hippocampal neural progenitor cells (AHNPCs) are one potential source of cells that can be used to this goal. In this chapter, we describe some of the in vivo techniques necessary to study hippocampal progenitors in the adult rat, including engraftment and analysis by immunofluorescent staining. These techniques are important for studying AHNPCs within the physiologically relevant environment of the adult brain rather than in a culture dish.

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