

# No rebirth for insulin secreting pancreatic beta cells

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Pancreatic beta cells store and release insulin, the hormone responsible for stimulating cells to convert glucose to energy. The number of beta cells in the pancreas increases in response to greater demand for insulin or injury, but it is not clear if the new beta cells are the result of cell division or the differentiation of a precursor cell, a process known as neogenesis. Knowledge of how beta cells are created and maintained is critical to understanding diseases in which these cells are lost, such as diabetes.

In this issue of the *Journal of Clinical Investigation*, George Gittes and colleagues at the Children's Hospital of Pittsburgh used a fluorescent cell labeling method in mice to determine exactly when [precursor cells](#) develop into [pancreatic beta cells](#). They observed neogenesis during embryonic development, but did not find any evidence of neogenesis in adult mice.

These data demonstrate that beta cell neogenesis is not possible in adult mice. In a companion commentary, Michael German at the University of California, San Francisco, discusses the experiments that will be required to determine if these findings also apply to humans.

**More information:** No evidence for beta cell neogenesis in murine adult pancreas, *J Clin Invest.* 2013;123(5):2207–2217. [doi:10.1172/JCI66323](https://doi.org/10.1172/JCI66323)  
Anonymous Sources: Where Do Adult  $\beta$ -Cells Come From? *J Clin Invest.* 2013;123(5):1936–1938. [doi:10.1172/JCI69297](https://doi.org/10.1172/JCI69297)

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