

Review

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No place like home: anatomy and function of the stem cell niche

D. Leanne Jones¹ & Amy J. Wagers² [About the authors](#)

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Stem cells are rare cells that are uniquely capable of both reproducing themselves (self-renewing) and generating the differentiated cell types that are needed to carry out specialized functions in the body. Stem cell behaviour, in particular the balance between self-renewal and differentiation, is ultimately controlled by the integration of intrinsic factors with extrinsic cues supplied by the surrounding microenvironment, known as the stem cell niche. The identification and characterization of niches within tissues has revealed an intriguing conservation of many components, although the mechanisms that regulate how niches are established, maintained and modified to support specific tissue stem cell functions are just beginning to be uncovered.

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Author affiliations

1. Laboratory of Genetics, The Salk Institute for Biological Studies, La Jolla, CA 92037, USA.
Email: ljones@salk.edu
2. Section on Developmental and Stem Cell Biology, Joslin Diabetes Center, and Harvard Stem Cell Institute, Boston, Massachusetts 02215, USA.
Email: amy.wagers@joslin.harvard.edu

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