Return to youth with Sox17.

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Public Summary: This News and Views article provides a commentary on the work performed by Sean Morrison and colleagues where they show that bone marrow stem/progenitor cells in the adult can acquire fetal properties when Sox17 is re-expressed in these cells.

Scientific Abstract: Maturation of hematopoietic stem cells (HSCs) from fetal to adult state and differentiation to progenitors are thought to follow a one-way street. In this issue of Genes & Development, He and colleagues (pp. 1613-1627) show that overexpression of Sox17 can convert adult multipotential progenitors to self-renewing HSCs that possess fetal properties. These findings challenge the irreversibility of hematopoietic development, and open up new perspectives to understand the different forms of HSC self-renewal at distinct stages of ontogeny and during transformation.

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