



## 成体幹細胞についての 最近のトピックス

*Recent Topics on Adult Stem Cells*

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### Keywords

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### Summary

Adult stem cells exert a key role in the maintenance of organ homeostasis and regeneration of damaged tissues. They reside in the specialized microenvironment known as niche. Signals from the niche play dominant roles in controlling stem cell self-renewal and maintaining stem cells in the undifferentiated state.

Adult stem cells work to maintain tissue homeostasis throughout the life of an individual, during which they are exposed to various stresses. On the other hand, the function of tissues and organs is gradually weakened, and the incidence of various aging-associated diseases increases upon aging. Recently, it has been shown that progressive decline in homeostatic and regenerative capacities of tissues and organs is, at least partially, attributed to degenerative changes in adult stem cells and/or stem cell niches. In many advanced countries, the number of patients suffering from aging-associated diseases is increasing due to the progress of aging society. Therefore, the stem cell research is expected to contribute for the development of novel therapeutic methods for these diseases.

### はじめに

成体幹細胞(組織幹細胞, 体性幹細胞)は自己複製能と多分化能を有する細胞で

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