

Molecule dictates how stem cells travel

U.S. researchers have defined a molecule that dictates how blood stem cells travel to the bone marrow and establish blood and immune cell production.

The discovery by researchers at the Massachusetts General Hospital Center for Regenerative Medicine and the Harvard Stem Cell Institute may help improve bone marrow stem cell transplantation and the treatment of several blood disorders.

"This is another remarkable example of how bone and bone marrow interact. A receptor known to participate in the body's regulation of calcium and bone also is critical for stem cells to engraft in the bone marrow and regenerate blood and immune cells," says Dr. David Scadden, director of the MGH Center for Regenerative Medicine and co-director of the HSCI.

"It reminds us how tissues interact and how looking closely at where stem cells reside may tell us a lot about how to manipulate them."

The findings will be published in the journal Nature.

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