

Researchers describe bone marrow stem cell population with potential for repeat transplantation

November 9 2016



Credit: Mary Ann Liebert, Inc., publishers

A new study demonstrates that non-blood cell forming stem cells present in human bone marrow play an important role in maintaining the hematopoietic microenvironment, and these stromal cells appear to retain full self-renewal potential after primary and secondary transplantations, according to an article published in *Stem Cells and Development*.

In the article "Human Non-Hematopoietic CD271pos/CD140alow/neg Bone Marrow Stroma Cells Fulfill Stringent Stem Cell Criteria in Serial Transplantations," the [bone marrow](#) stromal [stem cells](#) (BMSCs) were shown to have the signature characteristics of self-renewing stem cells capable of differentiating into many different types of skeletal cell lines. Coauthors Roshanak Ghazanfari, Hongzhe Li, Dimitra Zacharaki, Hooi Ching Lim, and Stefan Scheduling, University of Lund and Skane University Hospital, Lund, Sweden, provided the first demonstration of the self-renewal and differential potential of human BMSCs in a serial transplantation experiment performed in mice.

"This elegant paper employs a unique profile and groundbreaking techniques to demonstrate that a subfraction of adult BMSCs fulfill stem cell criteria in serial transplantations," says Editor-in-Chief Graham C. Parker, PhD, The Carman and Ann Adams Department of Pediatrics, Wayne State University School of Medicine, Detroit, MI.

More information: Roshanak Ghazanfari et al, Human Non-Hematopoietic CD271/CD140a Bone Marrow Stroma Cells Fulfill Stringent Stem Cell Criteria in Serial Transplantations, *Stem Cells and Development* (2016). [DOI: 10.1089/scd.2016.0169](https://doi.org/10.1089/scd.2016.0169)

Provided by Mary Ann Liebert, Inc

Citation: Researchers describe bone marrow stem cell population with potential for repeat transplantation (2016, November 9) retrieved 24 April 2024 from <https://medicalxpress.com/news/2016-11-bone-marrow-stem-cell-population.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.