


Experimental Neurology
 Volume 178, Issue 2 , December 2002, Pages 288-293

doi:10.1006/exnr.2002.8039  [Cite or Link Using DOI](#)
 Copyright © 2002 Elsevier Science (USA). All rights reserved.

Brief Communication

Generation of Neural Progenitor Cells from Whole Adult Bone Marrow

Peter Kabos, Moneeb Ehtesham, Andrea Kabosova, Keith L. Black and John S. Yu^{1,2}

Maxine Dunitz Neurosurgical Institute, Cedars-Sinai Medical Center, Suite 800E, 8631 West 3rd Street, Los Angeles, California, 90048

Received 17 December 2001; accepted 22 August 2002. ; Available online 20 December 2002.

Abstract

The efficient and large-scale generation of neural progenitor cells for neural grafting in the treatment of neurological diseases has been a challenge. Here we describe the isolation and successful propagation of neural progenitor cells from adult rat bone marrow. Unfractionated bone marrow cultured *in vitro* with epidermal growth factor and basic fibroblast growth


http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6WFG-47GRVP9-G&_coverDate=12%2F31%2F2002&_alid=4589200... 01/10/2006

factor gave rise to cellular spheres which differentiated into neurons and glia. The cellular spheres expressed nestin, a neural stem cell marker as well as CD90, a marker of hematopoietic stem cells. This methodology addresses the ethical and tissue rejection problems associated with fetal neural stem cells and would circumvent the difficulty associated with generating neural progenitors from the adult brain. We demonstrate that bone marrow may offer a renewable autologous extracranial source of neural progenitor cells.

¹ This work was supported in part by NIH Grant NS02232 to J.S.Y.

² To whom correspondence should be addressed. Fax: (310) 423-0810. E-mail: yuj@cshs.org.

Experimental Neurology
 Volume 178, Issue 2 , December 2002, Pages 288-293

This Document
<ul style="list-style-type: none"> ▶ Abstract • Abstract + References • PDF (225 K)
Actions
<ul style="list-style-type: none"> • E-mail Article •  Add to my Quick Links

