



期刊导读

6卷11期 2012年6月 [最新]



期刊存档

期刊存档

[查看目录](#)

期刊订阅



在线订阅



邮件订阅



RSS

作者中心



晋升信息



作者查稿



写作技巧



投稿方式



作者指南



期刊服务



建议我们



会员服务



广告合作



继续教育

您的位置: [首页](#)>> [文章摘要](#)

脂肪源性干细胞的定向分化潜能及临床应用前景

王伟, 撒亚莲, 严新民

王伟、撒亚莲、严新民, 云南省第一人民医院 昆明医学院附属昆华医院 临床基础医学研究所, 650032

基金项目: 云南省自然科学基金资助项目(2007C0034R; 2004C0015R)

摘要: 脂肪源性干细胞(adipose-derived stem cells, ADSCs)是一种具有自我更新与多向分化潜能的成体间充质干细胞。在特定诱导条件下, ADSCs具有跨越胚层分化的潜能。本文就ADSCs的定向分化潜能及其作为细胞治疗与组织工程的种子细胞、基因治疗载体的临床应用前景进行综述。

关键词: 脂肪源性干细胞

[评论](#) [收藏](#) [全文阅读](#): [FullText](#) | [PDF](#)

文献标引: 王伟, 撒亚莲, 严新民. 脂肪源性干细胞的定向分化潜能及临床应用前景[J/CD]. 中华临床医师杂志: 电子版, 2011, 5(2): 461-464. [复制](#)

参考文献:

- [1] Zuk PA, Zhu M, Mizuno H, et al. Multilineage cells from human adipose tissue: implications for cell-based therapies. *Tissue Eng*, 2001, 7(2): 211-228. [\[PubMed\]](#)
- [2] Prunet-Marcassus B, Cousin B, Caton D, et al. From heterogeneity to plasticity in adipose tissues: site-specific differences. *Exp Cell Res*, 2006, 312(6): 727-736. [\[PubMed\]](#)
- [3] Aust L, Devlin B, Foster SJ, et al. Yield of human adipose-derived adult stem cells from liposuction aspirates. *Cytotherapy*, 2004, 6(1): 7-14. [\[PubMed\]](#)
- [4] Quirici N, Scavullo C, de Girolamo L, et al. Anti-L-NGFR and-CD34 monoclonal antibodies identify multipotent mesenchymal stem cells in human adipose tissue. *Stem Cells Dev*, 2010, 19(6): 915-925. [\[PubMed\]](#)
- [5] Puissant B, Barreau C, Bourin P, et al. Immunomodulatory effect of human adipose tissue-derived adult stem cells: comparison with bone marrow mesenchymal stem cells. *Br J Haematol*, 2005, 129(1): 118-129. [\[PubMed\]](#)
- [6] Zuk PA. The adipose-derived stem cell: looking back and looking ahead. *Mol Biol Cell*, 2010, 21(11): 1783-1787. [\[PubMed\]](#)
- [7] Yoon E, Dhar S, Chun DE, et al. In vivo osteogenic potential of human adipose-derived stem cells/poly lactide-co-glycolic acid constructs for bone regeneration in a rat critical-sized calvarial defect model. *Tissue Eng*, 2007, 13(3): 619-627. [\[PubMed\]](#)
- [8] Lendeckel S, J dicke A, Christophis P, et al. Autologous stem cells (adipose) and fibrin glue used to treat widespread traumatic calvarial defects: case report. *J Craniomaxillofac Surg*, 2004, 32(6): 370-373. [\[PubMed\]](#)
- [9] Aksu AE, Rubin JP, Dudas JR, et al. Role of gender and anatomical region on induction of osteogenic differentiation of human adipose-derived stem cells. *Ann Plast Surg*, 2008, 60(3): 306-322. [\[PubMed\]](#)
- [10] 周全, 邓展生, 朱勇, 等. 胰岛素样生长因子1对人脂肪来源的间充质干细胞向软骨细胞定向诱导分化的作用. *中国组织工程研究与临床康复*, 2010, 14(10): 1785-1790.
- [11] Wall ME, Bernacki SH, Loba EG. Effects of serial passaging on the adipogenic and osteogenic differentiation potential of adipose-derived human mesenchymal stem cells. *Tissue Eng*, 2007, 13(6): 1291-1298. [\[PubMed\]](#)
- [12] Cho HH, Kim YJ, Kim SJ, et al. Endogenous Wnt signaling promotes proliferation and suppresses osteogenic differentiation in human adipose derived stromal cells. *Tissue Eng*, 2006, 12(1): 111-121. [\[PubMed\]](#)
- [13] Patrick CW Jr, Zheng B, Johnston C, et al. Long-term implantation of preadipocyte-seeded PLGA scaffolds. *Tissue Eng*, 2002, 8(2): 283-293. [\[PubMed\]](#)
- [14] Zuk PA, Zhu M, Ashjian P, et al. Human adipose tissue is a source of multipotent stem cells. *Mol Biol Cell*, 2002, 13(12): 4279-4295. [\[PubMed\]](#)
- [15] Goudenege S, Pisani DF, Wdziekonski B, et al. Enhancement of myogenic and muscle repair capacities of human adipose-derived stem cells with forced expression of MyoD. *Mol Ther*, 2009, 17(6): 1064-1072.

[PubMed]

[16] Rodríguez LV, Alfonso Z, Zhang R, et al. Clonogenic multipotent stem cells in human adipose tissue differentiate into functional smooth muscle cells. *Proc Natl Acad Sci U S A*, 2006, 103(32): 12167-12172.

[PubMed]

[17] Miyahara Y, Nagaya N, Kataoka M, et al. Monolayered mesenchymal stem cells repair scarred myocardium after myocardial infarction. *Nat Med*, 2006, 12(4): 459-465. [PubMed]

[18] Safford KM, Rice HE. Stem cell therapy for neurologic disorders: therapeutic potential of adipose-derived stem cells. *Curr Drug Targets*, 2005, 6(1): 57-62. [PubMed]

[19] Aluigi MG, Coradeghini R, Guida C, et al. Pre-adipocytes commitment to neurogenesis 1: preliminary localisation of cholinergic molecules. *Cell Biol Int*, 2009, 33(5): 594-601. [PubMed]

[20] Kim JM, Lee ST, Chu K, et al. Systemic transplantation of human adipose stem cells attenuated cerebral inflammation and degeneration in a hemorrhagic stroke model. *Brain Res*, 2007, 1183: 43-50. [PubMed]

[21] Ning H, Huang YC, Banie L, et al. MicroRNA regulation of neuron-like differentiation of adipose tissue-derived stem cells. *Differentiation*, 2009, 78(5): 253-259. [PubMed]

[22] Brzoska M, Geiger H, Gauer S, et al. Epithelial differentiation of human adipose tissue-derived adult stem cells. *Biochem Biophys Res Commun*, 2005, 330(1): 142-150. [PubMed]

[23] Jeong JH. Adipose stem cells and skin repair. *Curr Stem Cell Res Ther*, 2010, 5(2): 137-140. [PubMed]

[24] Seo MJ, Suh SY, Bae YC, et al. Differentiation of human adipose stromal cells into hepatic lineage in vitro and in vivo. *Biochem Biophys Res Commun*, 2005, 328(1): 258-264. [PubMed]

[25] Miranville A, Heeschen C, Sengenès C, et al. Improvement of postnatal neovascularization by human adipose tissue-derived stem cells. *Circulation*, 2004, 110(3): 349-355. [PubMed]

[26] Rehman J, Traktuev D, Li J, et al. Secretion of angiogenic and antiapoptotic factors by human adipose stromal cells. *Circulation*, 2004, 109(10): 1292-1298. [PubMed]

[27] Timper K, Sebock D, Eberhardt M, et al. Human adipose tissue-derived mesenchymal stem cells differentiate into insulin, somatostatin, and glucagon expressing cells. *Biochem Biophys Res Commun*, 2006, 341(4): 1135-1140. [PubMed]

[28] Lin G, Wang G, Liu G, et al. Treatment of type 1 diabetes with adipose tissue-derived stem cells expressing pancreatic duodenal homeobox 1. *Stem Cells Dev*, 2009, 18(10): 1399-1406. [PubMed]

[29] Li K, Han Q, Yan X, et al. Not a process of simple vicariousness, the differentiation of human adipose-derived mesenchymal stem cells to renal tubular epithelial cells plays an important role in acute kidney injury repairing. *Stem Cells Dev*, 2010, 19(8): 1267-1275. [PubMed]

[30] 袁先道, 闫曦, 杨华, 等. 人脂肪源性间充质干细胞向内耳毛细胞定向诱导分化的实验研究. *中华耳鼻咽喉头颈外科杂志*, 2009, 44(4): 323-328.

[31] Park BS, Jang KA, Sung JH, et al. Adipose-derived stem cells and their secretory factors as a promising therapy for skin aging. *Dermatol Surg*, 2008, 34(10): 1323-1326. [PubMed]

[32] Lin G, Banie L, Ning H, et al. Potential of adipose-derived stem cells for treatment of erectile dysfunction. *J Sex Med*, 2009, 6 Suppl 3: 320-327. [PubMed]

[33] Sun N, Panetta NJ, Gupta DM, et al. Feeder-free derivation of induced pluripotent stem cells from adult human adipose stem cells. *Proc Natl Acad Sci U S A*, 2009, 106(37): 15720-15725. [PubMed]

[34] Morizono K, De Ugarte DA, Zhu M, et al. Multilineage cells from adipose tissue as gene delivery vehicles. *Hum Gene Ther*, 2003, 14(1): 59-66. [PubMed]

[35] Kucerova L, Matuskova M, Pastorakova A, et al. Cytosine deaminase expressing human mesenchymal stem cells mediated tumour regression in melanoma bearing mice. *J Gene Med*, 2008, 10(10): 1071-1082. [PubMed]

综 述

耳廓假性囊肿的研究进展

马桂琴, 李连贺. . *中华临床医师杂志: 电子版* 2011;5(2):435-437.

摘要 [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

乳腺癌常规治疗失败后的替代药物

陈振东, 程怀东. . *中华临床医师杂志: 电子版* 2011;5(2):438-441.

摘要 [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

stomatin家族与恶性肿瘤

常栋, 王天佑, 刘芝华. . *中华临床医师杂志: 电子版* 2011;5(2):442-445.

摘要 [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

PI3K/Akt信号传导通路与肿瘤多药耐药研究进展

张晔, 刘云鹏. . *中华临床医师杂志: 电子版* 2011;5(2):446-449.

摘要 [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

腹腔镜在小儿外科的应用及进展

张强业, 张刚, 李爱武. . 中华临床医师杂志: 电子版
2011;5(2):450-453.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

内毒素血症的免疫学发病机制

郭媛, 魏筱华, 谢珺, 白爱平. . 中华临床医师杂志: 电子版
2011;5(2):454-456.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

炎症因子与慢性心力衰竭

何文俊, 张涛, 蒋学俊, 林洪平. . 中华临床医师杂志: 电子版
2011;5(2):457-460.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

脂肪源性干细胞的定向分化潜能及临床应用前景

王伟, 撒亚莲, 严新民. . 中华临床医师杂志: 电子版
2011;5(2):461-464.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

内脂素与妊娠期糖尿病关系的研究进展

刘斌, 王子莲. . 中华临床医师杂志: 电子版
2011;5(2):465-468.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

肝脏转氨酶升高对预测患者临床转归的意义

郑刚. . 中华临床医师杂志: 电子版
2011;5(2):469-472.

[摘要](#) [FullText](#) | [PDF](#) | [评论](#) | [收藏](#)

| [编委会](#) | [联系我们](#) | [合作伙伴](#) | [友情链接](#) | [网站地图](#) | [建议我们](#)

© 2012版权声明 中华临床医师杂志(电子版)编辑部
网站建设: 北京华夏世通信息技术有限公司 京ICP备09112119号-7
北京市公安局西城分局备案编号: 110102000676