医学综述选题与撰写

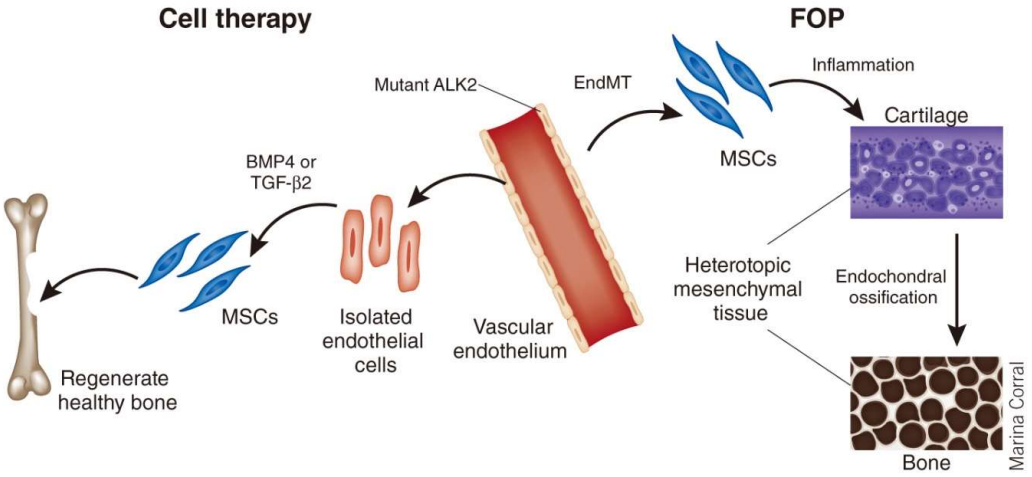
武汉大学　文印宪
发育源性疾病湖北省重点实验室

Building bone from blood vessels

Edwin M Horwitz

Mesenchymal stem cells (MSCs) can form different cell types in culture, but their potential to build new tissue in various disorders where tissue is damaged has not been realized. A study now shows how mature cells from blood vessels are a new source of MSCs that may be used to regenerate cartilage and bone (pages 1400–1406).

MSCs are a heterogeneous population of spindle-shaped, plastic-adherent cells that are usually isolated from bone marrow and adipose tissue. But other sources exist, including cord blood, placenta and various fetal tissues. The surface phenotype used to identify MSCs is typically expression of CD105, CD73 and CD90 and the absence of hematopoietic surface markers[1]. Several investigators have sought to identify a single unique surface antigen to better define MSCs, but such efforts have not been fruitful. The hallmark of MSCs seems to be the capacity to differentiate into osteoblasts, adipocytes and chondrocytes *in vitro* when they are maintained under the



Cell Metabolism
Previews

On Bone-Forming Cells and Blood Vessels in Bone Development

Claire Clarkin[1] and Bjorn R. Olsen[1,*]
[1]Harvard School of Dental Medicine, 188 Longwood Avenue, Boston, MA 02115, USA
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DOI 10.1016/j.cmet.2010.09.009

Replacement of nonvascular cartilage by bone and bone marrow is a critical step in bone development. In a recent issue of *Developmental Cell*, Maes et al. (2010) report that a distinct population of immature precursors of bone-forming cells migrate into the cartilage in intimate association with invading blood vessels.

The development of most bones, such as bones in the limbs and spine, proceeds via a two-stage process known as endochondral ossification. The architectural modeling of a bone takes place in the location of the future bone via assembly of a template. The template consists of hyaline cartilage, a nonvascular tissue composed of chondrocytes dispersed within a complex extracellular matrix. As the template grows and takes on the shape of the future bone, chondrocytes

TRB3: A *tribbles* Homolog That Inhibits Akt/PKB Activation by Insulin in Liver
Keyong Du *et al.*
Science **300**, 1574 (2003);
DOI: 10.1126/science.1079817

TRB3: A *tribbles* Homolog That Inhibits Akt/PKB Activation by Insulin in Liver

Keyong Du,[1]* Stephan Herzig,[1]* Rohit N. Kulkarni,[2] Marc Montminy[1]†

Insulin resistance is a major hallmark in the development of type II diabetes, which is characterized by the failure of insulin to promote glucose uptake in muscle and to suppress glucose production in liver. The serine-threonine kinase Akt (PKB) is a principal target of insulin signaling that inhibits hepatic glucose output when glucose is available from food. Here we show that TRB3, a mammalian homolog of *Drosophila tribbles*, functions as a negative modulator

phosphatase PP2A in response to certain stimuli such as hyperosmotic stress (*7*). A protein inhibitor, referred to as COOH-terminal Akt modulatory protein (CTMP), has been shown to inhibit Akt activity by binding to its COOH-terminal regulatory domain (*8*), although its effect on insulin signaling has not been determined.

To identify additional proteins that modulate Akt activity, we used a yeast two-hybrid assay to screen for proteins from a preadipocyte F422A cDNA library that interacted with a GAL4-Akt ΔPH construct lacking the NH_2-terminal pleckstrin homology domain (amino acids 1 to 145) of Akt1. Twenty-five independent transfor-

综述

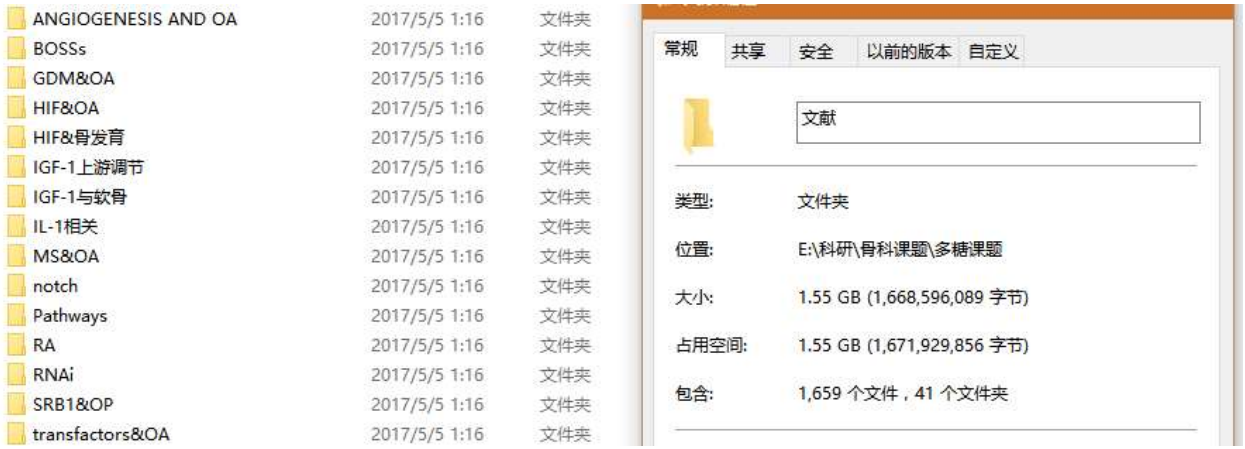
是在查阅了科学领域某一专题在一定时期内的相当数量的文献资料的基础上，经过总结、分析，选取有关情报信息，进行归纳整理，作出综合性描述的文章。

综述的特点

- 形式
  - 篇幅及形式相对自由
  - 语言、图标高度凝练
- 内容
  - 关注热点、难点与新进展
  - 展示某一领域研究的前世今生

写作前的准备

- 读万卷书
- 其他：没有了……



撰写综述的一般步骤

- ✓ 选题
- ✓ 搜集资料
- ✓ 筛选、鉴别、归纳、整理资料
- ✓ 撰写大纲、安排资料
- ✓ 撰写全文、引用文献
- ✓ 审校、修改初稿、定稿

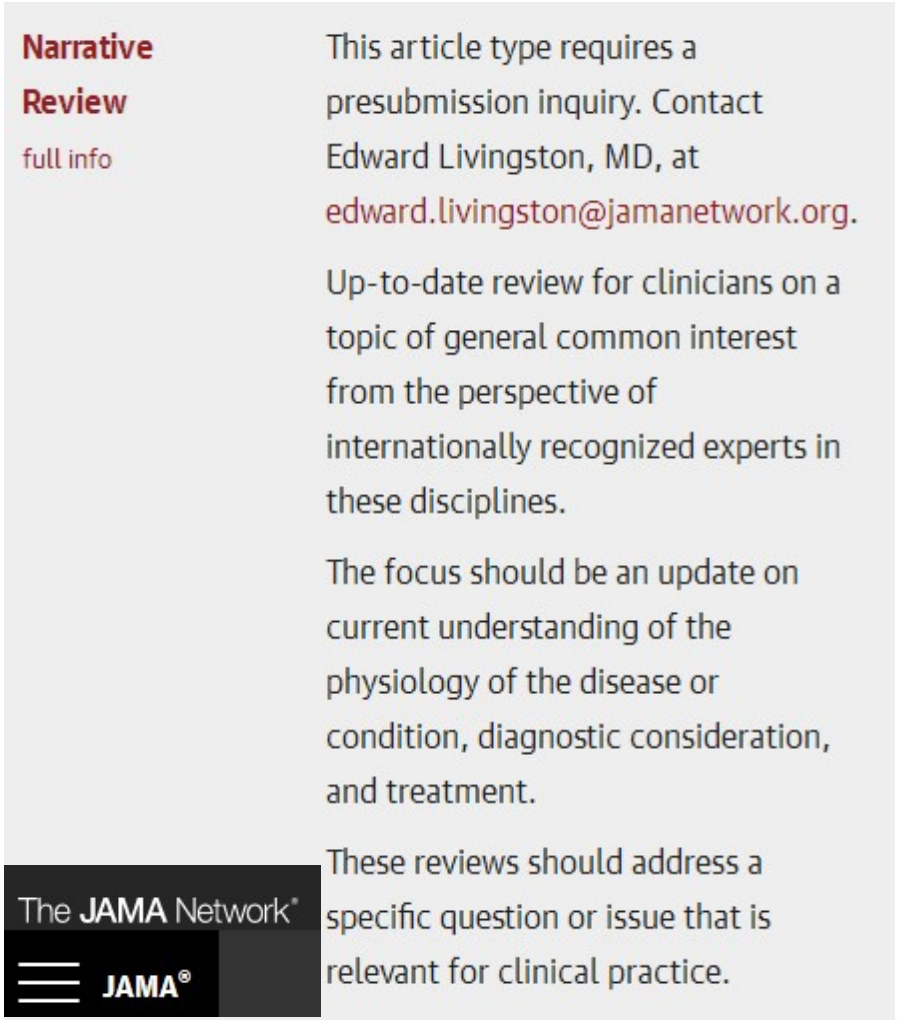
讲座提纲

一、综述选题

二、综述撰写

综述选题

- 基本原则：
  - 关注热点、难点与新进展
  - 实用或理论价值
  - 科学性与先进性



Glucocorticoids and fetal programming part 1: outcomes

Vasilis G. Moisiadis and Steph

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Glucocorticoids and fetal programming part 2: mechanisms

Vasilis G. Moisiadis and Stephen G. Matthews

Abstract | The lifelong health of an individual is shaped during critical periods of development. The fetus is particularly susceptible to internal and external stimuli, many of which can alter developmental trajectories and subsequent susceptibility to disease. Glucocorticoids are critical in normal development of the fetus, as they are involved in the growth and maturation of many organ systems. The surge in fetal glucocorticoid levels that occurs in most mammalian species over the last few days of pregnancy is an important developmental switch leading to fundamental changes in gene regulation in many organs, including the brain. These changes are important for the transition to postnatal life. Exposure of the fetus to increased levels of glucocorticoids, resulting from maternal stress or treatment with synthetic glucocorticoids, can lead to long-term 'programming' of hypothalamic–pituitary–adrenal function and behaviours. Glucocorticoids act at

JAMA Clinical Evidence Synopsis

NSAIDs for Chronic Low Back Pain

Wendy T. M. Enthoven, MD, PhD; Pepijn D. Roelofs, PhD; Bart W. Koes, PhD

CLINICAL QUESTION Are nonsteroidal anti-inflammatory drugs (NSAIDs) associated with greater pain relief than placebo, other drugs, and nondrug treatments for patients with chronic low back pain?

BOTTOM LINE Compared with placebo, NSAIDs are associated with a small but significant improvement in pain and disability in patients with chronic low back pain, although this difference became nonsignificant when studies with high risk for bias were excluded. The associated benefits were smaller than the minimal clinically important difference.

选题范围

✓ 熟悉的领域

— 一种疾病，一种方法，一个理论，一个通路，一个分子

✓ 注意定位

— 大小适中、时间、知识背景

✓ 研究基础与背景

— 个人与团队研究基础

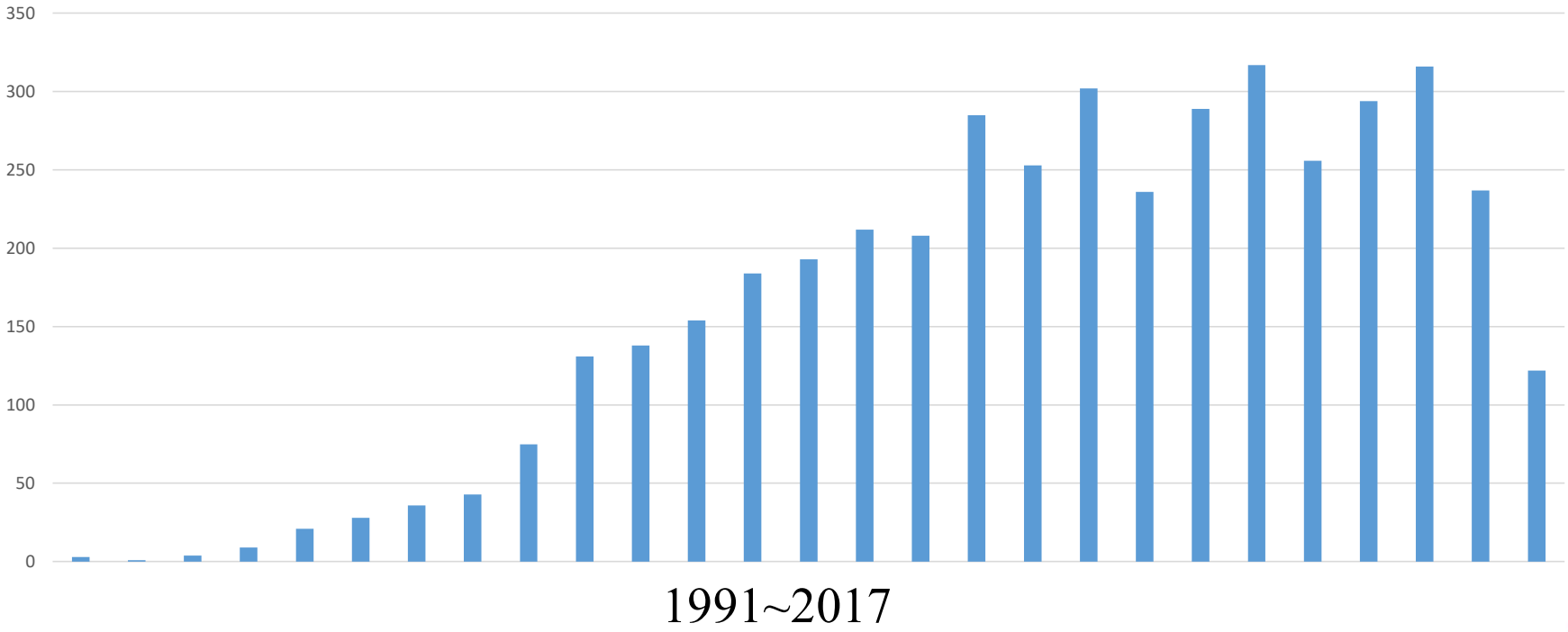
综述选题的调整

- ✓ 广泛搜集相关专业资料及经典综述
- ✓ 研究本领域研究的总体框架、来龙去脉
- ✓ 分析文献的量、研究的深度和广度
- ✓ 确立综述课题

热度分析

Pubmed

Search (vegf) AND angiogenesis Filters: Review



范围制定

VEGF与肺癌

VEGF与肺癌靶向治疗

VEGF相关单克隆抗体与肺癌靶向治疗

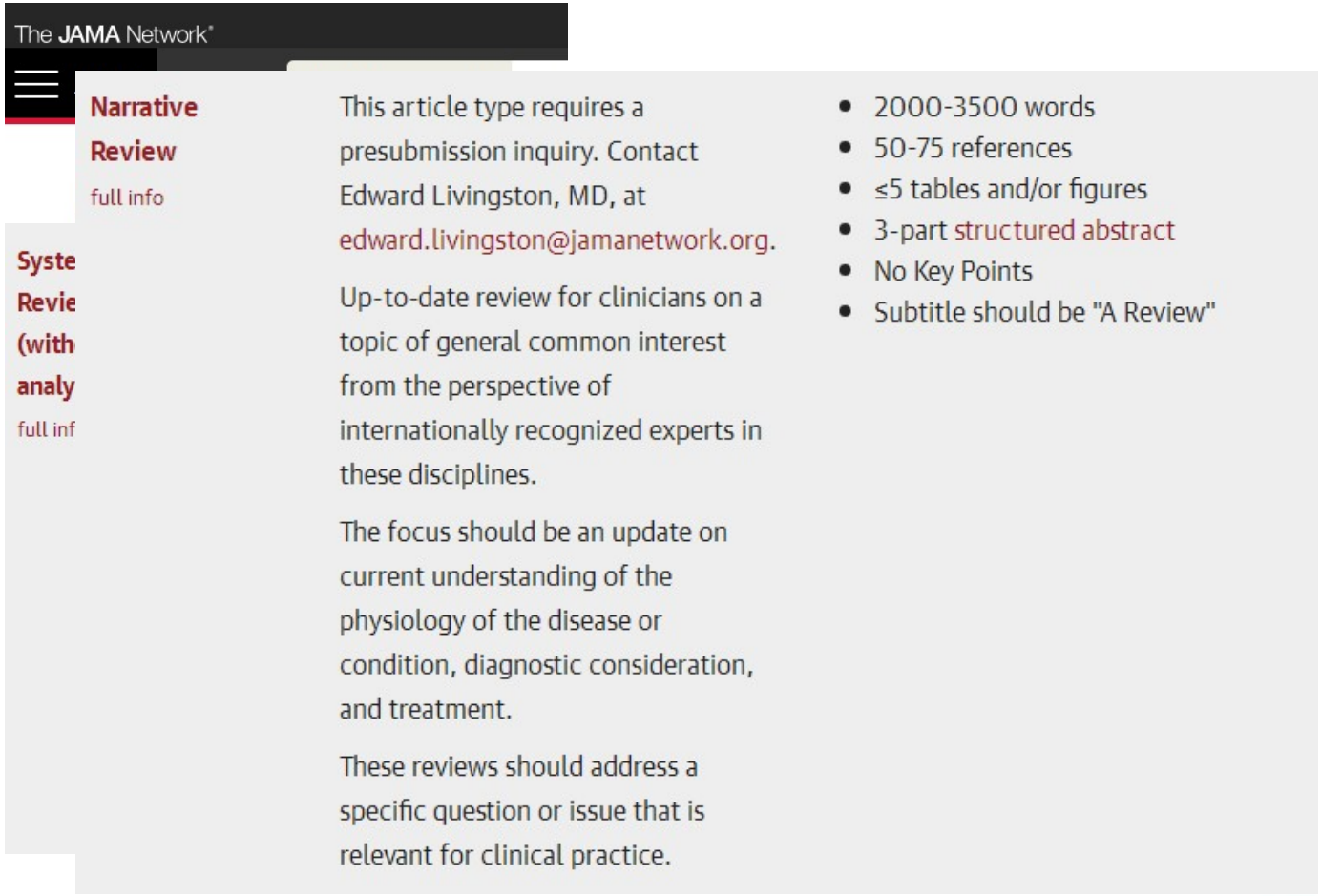
讲座提纲

一、综述选题

二、综述撰写

格式要求

- ✓ 尊重杂志要求
- ✓ 合适的文章类型
- ✓ 严谨、规范



题目的制定

- ✓ 基本要求
  - — 精炼、准确、创新性与时效性
- ✓ 小技巧
  - — 差异化命题
  - — 冒号与副标题
  - — 陈述或疑问语气

THE LANCET

Osteoarthritis: an update with relevance for clinical practice

Johannes W J Bijlsma, Francis Berenbaum, Floris P J G Lafeber

Osteoarthritis is thought to be the most prevalent chronic joint disease. The incidence of osteoarthritis is rising because of the ageing population and the epidemic of obesity. Pain and loss of function are the main clinical features that lead to treatment, including non-pharmacological, pharmacological, and surgical approaches. Clinicians recognise that the diagnosis of osteoarthritis is established late in the disease process, maybe too late to expect much help from disease-modifying drugs. Despite efforts over the past decades to develop markers of disease, still-imaging procedures and biochemical marker analyses need to be improved and possibly extended with more specific and sensitive methods to reliably describe disease processes, to diagnose the disease at an early stage, to classify patients according to their prognosis, and to follow the course of disease and treatment effectiveness. In the coming years, a better definition of osteoarthritis is expected by delineating different phenotypes of the disease. Treatment targeted more specifically at these phenotypes might lead to improved outcomes.

Lancet 2011; 377: 2115–26

See Comment page 2067

This is the first in a Series of three papers about arthritis

Department of Rheumatology and Clinical Immunology, University Medical Centre Utrecht, Utrecht, Netherlands (Prof J W J Bijlsma MD, F P J G Lafeber PhD); **and Department of Rheumatology, Pierre and Marie Curie**

Cell Research (2010) 20:977-979.

www.nature.com/cr

RESEARCH HIGHLIGHT

HIF-2α - a mediator of osteoarthritis?

Christopher L Murphy[1]

[1]*The Kennedy Institute of Rheumatology, Imperial College London, 65 Aspenlea Road, London W6 8LH, England, United Kingdom.*
Cell Research (2010) **20**:977-979. doi:10.1038/cr.2010.99; published online 13 July 2010

Two recent publications in *Nature Medicine* (June 2010) have focused at-

levels drop below a certain level (typically < 5%), hydroxylation becomes

2]. Yang and colleagues also observed huge joint tissue destruction following

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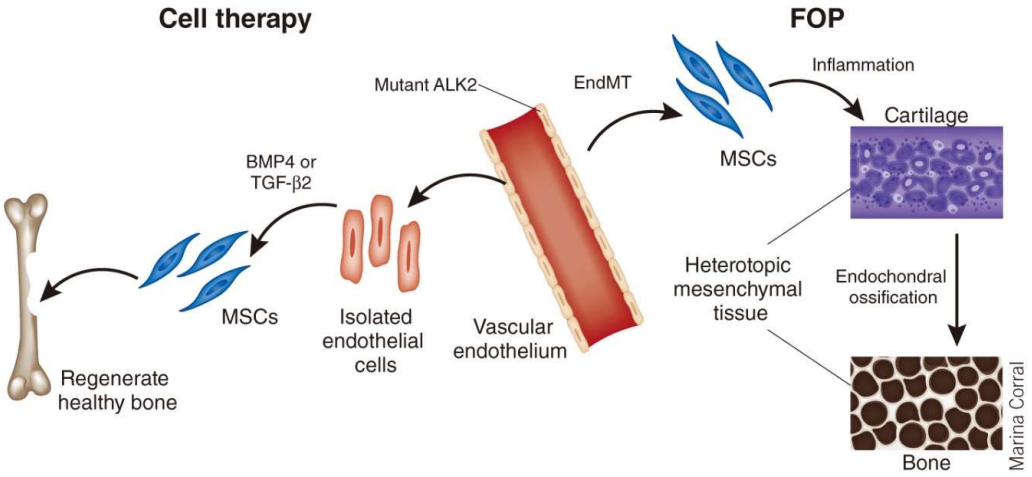

综述大纲

✓ 根据要求划分前言、主体、总结等部分

✓ 列出主体部分每个层次的小标题

— 注意逻辑结构

— 言简意赅

✓ 安插材料

— 用简短的词语在各个层次标题与段落之下，并注明材料出处。

Neuropsychologia

Volume 48, Issue 3, February 2010, Pages 669-680

Body schema and body image—Pros and cons

Frederique de Vignemont

孕期乙醇暴露与高糖皮质激素相关胎儿神经内分泌-代谢编程

摘要的撰写

✓ 基本要求

— 精炼、准确、实事求是、体现创新

✓ 几句话

— 背景、主题与研究领域、核心问题、问题与展望

✓ 有思想

— 不是一味总结归纳，用别人的嘴说自己的话

— 合理的提出观点、质疑，甚至理论

THE LANCET

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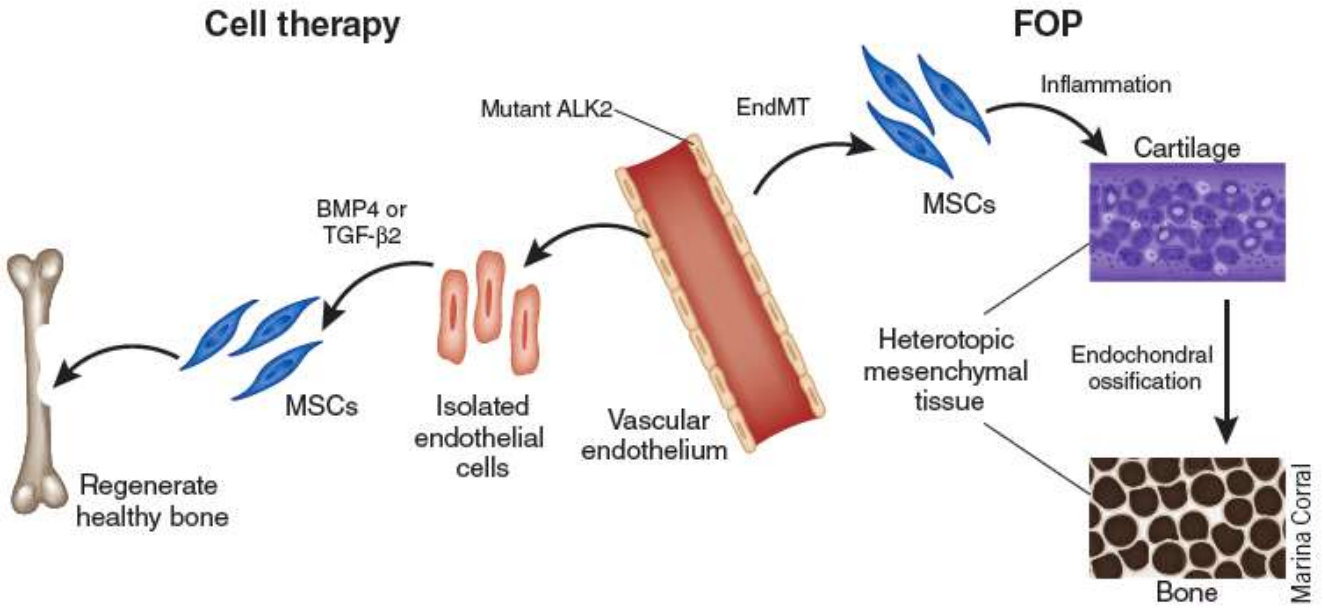
综述内容

- ✓ 注意的问题
  - 内容的广度与深度
  - 结构安排的逻辑性与科学性
  - 引用文献的准确性与真实性
  - 证据汇总与观点的提炼
  - 合理的推测与假设

综述内容

- ✓加分点
- — 精干的小标题
- — 漂亮的图表
- — 新近的权威文献
- — 标准的语言



Glucocorticoids and fetal programming part 1: outcomes

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Glucocorticoids and fetal programming part 2: mechanisms

Vasilis G. Moisiadis and Stephen G. Matthews

Key points

- Transporter proteins and enzymes in the placenta and fetus protect the fetus from exposure to high levels of glucocorticoid; however, expression of these factors changes as a function of gestational age
- Differences exist in the mechanisms by which synthetic glucocorticoids and endogenous glucocorticoids (that is, cortisol) affect fetal brain development, due to differences in receptor activation
- Prenatal stress and glucocorticoids can influence the developing epigenome in a number of ways, including modified DNA methylation, histone acetylation and microRNA expression
- Glucocorticoids probably act via a number of direct and indirect routes to influence the developing epigenome
- Programmed changes in hypothalamic–pituitary–adrenal function and other endocrine systems following antenatal glucocorticoid exposure probably continue interacting with the epigenome throughout life
- The latest evidence indicates that transgenerational epigenetic transmission might be partly responsible for the multigenerational effects of synthetic glucocorticoid exposure and maternal stress in pregnancy

Effects in the brain

Once in the brain, glucocorticoids affect many aspects of neurogenesis and gliogenesis. These effects are greatest in brain structures that contain the highest levels of glucocorticoid receptors (GR) and mineralocorticoid receptors (MR), such as the limbic system, hypothalamus and cortex; these are the same areas that are critical for the regulation of HPA function.[15] Glucocorticoids also affect axonal and dendritic development and synaptogenesis.[16,17] Importantly, both GR and MR are expressed at high levels in the fetal brain of many species, including humans.[18] Their expression is highly region-specific and changes dynamically with advancing gestation.

Physiol Rev 93: 1139–1206, 2013
doi:10.1152/physrev.00020.2012

11β-HYDROXYSTEROID DEHYDROGENASES: INTRACELLULAR GATE-KEEPERS OF TISSUE GLUCOCORTICOID ACTION

Karen Chapman, Megan Holmes, and Jonathan Seckl

Endocrinology Unit, Centre for Cardiovascular Science, The Queen's Medical Research Institute, University of Edinburgh, Edinburgh, United Kingdom

Chapman K, Holmes M, Seckl J. 11β-Hydroxysteroid Dehydrogenases: Intracellular Gate-Keepers of Tissue Glucocorticoid Action. *Physiol Rev* 93: 1139–1206, 2013; doi:10.1152/physrev.00020.2012.—Glucocorticoid action on target tissues is determined by the density of "nuclear" receptors and intracellular metabolism by the two isozymes of 11β-hydroxysteroid dehydrogenase (11β-HSD) which catalyze interconversion of active cortisol and corticosterone with inert cortisone and 11-dehydrocorticosterone. 11β-HSD type 1, a predominant reductase in most intact cells, catalyzes the regeneration of active glucocorticoids, thus amplifying cellular action. 11β-HSD1 is widely expressed in liver, adipose tissue, muscle, pancreatic islets, adult brain, inflammatory cells, and gonads. 11β-HSD1 is selectively elevated in adipose tissue in obesity where it contributes to metabolic complications. Similarly, 11β-HSD1 is elevated in the ageing brain where it exacerbates glucocorticoid-associated cognitive

修改与定稿

✓内容和主题的修改

— 对综述撰写的目的、意义是否明确，选题是否恰当，信息是否全面，周密等方面再进行检验、查核，并作出必要的修改

✓材料的修改

— 对材料进行增、删或更换，突出新颖性，抓住研究热点，丰富综述的内容

修改与定稿

✓结构的修改

— 主要是使综述的整体突出、层次分明、均衡衔接，同时也使篇幅符合规定要求

✓语言和文字的修改

— 文章的语言和文字要求语句准确、精练，所谓“词无浪费、句无虚发、言简意赅，用词恰当”，并对错别字和标点符号进行校对和改正

补充讨论：课题综述撰写

✓万变不离其宗

— 基本原则、要求类似

✓兼顾广度与深度

— 知识体系的建立、课题方向与关键科学问题的确定

✓篇幅不限，尽情发挥

Thank You