

小鼠生殖细胞的胚胎发育 Germ Cells in the Murine Embryonic Development

韩嵘, 尚克刚 HAN Rong, SHANG Ke-gang

北京大学生命科学学院, 100871 College of Life Sciences, Peking University, Beijing 100871, China

收稿日期 修回日期 网络版发布日期 接受日期

摘要 本文综述了近年来小鼠胚胎发育过程中生殖细胞的起源、迁移与增殖、性别分化及其基因组修饰等方面的研究进展。小鼠生殖细胞在7~7.5dpc时由原始生殖细胞(PGC)演变而来,至12.5dpc时PGC全部迁移进入生殖嵴,到13.5dpc时停止分裂。Steel/c-kit信号途径在PGC迁移过程中起重要作用。生殖细胞的性别主要是由生殖腺中体细胞的微环境决定的。Y染色体上存在精子形成所必需的基因。生殖细胞的全基因组范围的重新甲基化晚于胚胎体细胞的重新甲基化,到18.5dpc时才完成。雌性生殖细胞的X染色体重新活化在14.5~15.5dpc时完成,并且与生殖嵴的性别分化无关。

Abstract: This paper reviewed the recent progress of the origin, migration and proliferation, sex determination, and genomic modification of murine germ cells during its embryonic development. Murine germ cells originate from primordial germ cells at about 7~7.5dpc. Then PGCs migrated into germinal ridge at about 12.5dpc during which Steel/c-kit signal pathway plays important roles and stopped division at 13.5dpc. The sex of germ cells was mainly determined by the soma microenvironment in the gonad. And there are essential genes for sperm formation on the Y chromosome. The de novo methylation of murine germ cells was much later than soma cells and was completed at about 18.5dpc. The X chromosome reactivation of female germ cells was finished at about 14.5~15.5dpc which was independent of sexual differentiation of germinal ridge.

关键词 [原始生殖细胞](#) [小鼠胚胎发育](#) **Key words** [primordial germ cells](#) [murine embryonic development](#)

分类号

扩展功能

本文信息

- ▶ [Supporting info](#)
- ▶ [PDF\(0KB\)](#)
- ▶ [\[HTML全文\]\(0KB\)](#)
- ▶ [参考文献](#)

服务与反馈

- ▶ [把本文推荐给朋友](#)
- ▶ [加入我的书架](#)
- ▶ [加入引用管理器](#)
- ▶ [复制索引](#)
- ▶ [Email Alert](#)
- ▶ [文章反馈](#)
- ▶ [浏览反馈信息](#)

相关信息

- ▶ [本刊中 包含“原始生殖细胞”的相关文章](#)
- ▶ [本文作者相关文章](#)

- [韩嵘](#)
- [尚克刚HAN Rong](#)
- [SHANG Ke-gang](#)

Abstract

Key words

DOI:

通讯作者