

MAMMALIAN PREIMPLANTATION DEVELOPMENT

Edited by

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This volume of *Current Topics in Developmental Biology* highlights the fundamental importance of preimplantation development and the recent breakthroughs in our understanding of the processes that govern it. The chapters provide a comprehensive picture of mammalian development from the 1-cell embryo to the period encompassing implantation of the blastocyst. Chapters are grouped into three sections: cell proliferation, cell differentiation, the differences that exist in preimplantation development among various mammalian species, and how genetic analysis of preimplantation embryos can overcome human infertility and facilitate the development of healthy offspring.

KEY FEATURES:

- Authoritative and expert contributions from an exciting area of biological research: mammalian preimplantation development
- Comprehensive and state-of-the-art reviews with emphasis on current views and findings

Cover image:

From chapter 3, figure 1, M.S.H. Ko. A bird's eye view of gene expression patterns during mouse preimplantation development. The expression changes of 12,179 genes are shown. A curve represents the expression of each gene over the preimplantation period and is color-coded by its expression levels (log-scale). Maternal RNA, RNAs stored in oocytes; ZGA, zygotic genome activation; MGA, mid-preimplantation gene activation. Adapted from *Reproductive BioMedicine Online*, Vol. 10, Suppl. 1, Ko, Molecular biology of preimplantation embryos: Primer for philosophical discussions, 80-87. Copyright (2005), with permission from Elsevier.



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