

THE MATERNAL-TO-ZYGOTIC TRANSITION

Edited by

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Maternal gene products program the initial development of all animal and plant embryos. These then undergo a series of events, termed the maternal-to-zygotic transition, during which maternal products are cleared and zygotic genome activation takes over developmental control. There have been enormous advances in elucidating the content, scale, dynamics, regulation and functions of the maternal-to-zygotic transition. This timely volume describes our current understanding of this process. Top researchers provide a diversity of perspectives on essentially all of the animals and plants in which we now have a deep understanding of the maternal-to-zygotic transition.

KEY FEATURES:

- Authoritative and expert contributions from this exciting area of biomedical research
- Comprehensive and state of the art reviews with emphasis on current developments in understanding the maternal-to-zygotic transition in plants and animals, vertebrates and invertebrates

Cover image:

Success and failure of the maternal-to-zygotic transition in a single *Drosophila* embryo. The embryo is from a *part gu* mutant female that is rescued by a transgene expressing *part gu* in the anterior (lower left) under control of the *bicoid* 3'UTR. Degradation of maternal *Top83* mRNA (red) has occurred in the rescued region but has failed in the posterior (top right). Likewise the nuclear cycles have only occurred in the rescued region (DNA is in green). For details see Chapter 2 and Tadros et al. (2002) *Dev. Cell*. Confocal image by Wasel Tadros courtesy of Howard Lipshitz.



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