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Nota di contenuto	CHD1 controls cell lineage specification through zygotic genome activation -- Chromatin remodelling proteins and cell fate decisions in mammalian preimplantation development -- Transcriptional regulation and genes involved in first lineage specification during preimplantation development -- ROCK and RHO playlist for preimplantation development: Streaming to HIPPO pathway and apicobasal polarity in the first cell differentiation -- XEN and the art of stem cell maintenance - molecular mechanisms maintaining cell fate and self-renewal in extraembryonic endoderm stem (XEN) cell lines. .
Sommario/riassunto	Five leaders in the field of mammalian preimplantation embryo development provide their own perspectives on key molecular and cellular processes that mediate lineage formation during the first week of life. The first cell-fate decision involves the formation of the pluripotent inner cell mass (ICM) and extraembryonic trophectoderm (TE). The second cell-fate choice encompasses the transformation of

ICM into extraembryonic primitive endoderm (PE) and pluripotent epiblast. The processes, which occur during the period of preimplantation development, serve as the foundation for subsequent developmental events such as implantation, placentation, and gastrulation. The mechanisms that regulate them are complex and involve many different factors operating spatially and temporally over several days to modulate embryonic chromatin structure, impose cellular polarity, and direct distinct gene expression programs in the first cell lineages. .