

Developmental Biology 13e, Chapter 13 Literature Cited

- Adamo, A. and 6 others. 2011. LSD1 regulates the balance between self-renewal and differentiation in human embryonic stem cells. *Nature Cell Biol.* 13: 652–660.
- Afzelius, B. A. 1976. A human syndrome caused by immotile cilia. *Science* 193: 317–319.
- Aires, R., A. D. Jurberg, F. Leal, A. Novoa, M. J. Cohn and M. Mallo. 2016. Oct4 is a key regulator of vertebrate trunk length diversity. *Dev. Cell* 38: 262–274
- Alev, C., Y. Wu, Y. Nakaya and G. Sheng. 2013. Decoupling of amniote gastrulation and streak formation reveals a morphogenetic unity in vertebrate mesoderm induction. *Development* 140: 2691–2696
- Ando, Y. and T. Fujimoto, T. 1983. Ultrastructural evidence that chick primordial germ-cells leave the blood-vascular system prior to migrating to the gonadal anlagen. *Dev. Growth Dif.* 25: 345–352.
- Arendt, D. and K. Nübler-Jung. 1999. Rearranging gastrulation in the name of yolk: Evolution of gastrulation in yolk-rich amniote eggs. *Mech. Dev.* 81: 3–22.
- Arias, C. F., M. A. Herrero, C. D. Stern and F. Bertocchini F. 2017. A molecular mechanism of symmetry breaking in the early chick embryo. *Sci. Rep.* 7: 15776.
- Arnold, S. J. and E. F. Robertson. 2009. Making a commitment: Cell lineage allocation and axis patterning in the early mouse embryo. *Nat. Rev. Mol. Cell Biol.* 10: 91–103.
- Bachvarova, R. F., I. Skromne and C. D. Stern. 1998. Induction of primitive streak and Hensen's node by the posterior marginal zone in the early chick embryo. *Development* 125: 3521–3534.
- Balinsky, B. I. 1975. *Introduction to Embryology*, 4th Ed. Saunders, Philadelphia.
- Bardot, E. S. and A.-K. Hadjantonakis. 2020. Mouse gastrulation: Coordination of tissue patterning, specification, and diversification of cell fate. *Mech. Dev.* 163: 103617.
- Beddington, R. S. P. and E. J. Robertson. 1999. Axis development and early asymmetry in mammals. *Cell* 96: 195–209.

Bellairs, R., F. W. Lorenz and T. Dunlap. 1978. Cleavage in the chick embryo. *J. Embryol. Exp. Morphol.* 43: 55–69.

Ben-Haim, N. and 8 others. 2006. The nodal precursor acting via activin receptors induces mesoderm by maintaining a source of its convertases and BMP4. *Dev. Cell* 11: 313–323.

Bertocchini, F. and C. D. Stern. 2002. The hypoblast of the chick embryo positions the primitive streak by antagonizing Nodal signaling. *Dev. Cell* 3: 735–744.

Bertocchini, F. and C. D. Stern. 2012. Gata2 provides an early anterior bias and uncovers a global positioning system for polarity in the amniote embryo. *Development* 139: 4232–4238.

Bertocchini, F., I. Skromne, L. Wolpert and C. D. Stern. 2004. Determination of embryonic polarity in a regulative system: Evidence for endogenous inhibitors acting sequentially during primitive streak formation in the chick embryo. *Development* 131: 3381–3390.

Bertocchini, F. C. Alev, Y. Nakaya and G. Sheng. 2013. A little winning streak: The reptilian-eye view of gastrulation in birds. *Dev. Growth Differ.* 55: 52–59.

Boettger, T., H. Knoetgen, L. Wittler and M. Kessel. 2001. The avian organizer. *Int. J. Dev. Biol.* 45: 281–287.

Boncinelli, E., R. Somma, D. Acampora, M. Pannese, M. D’Esposito, A. Faiella and A. Simeone. 1988. Organization of human homeobox genes. *Hum. Reprod.* 3: 880–886.

Borland, R. M. 1977. Transport processes in the mammalian blastocyst. *Dev. Mammals* 1: 31–67.

Boyer, L. A. and 13 others. 2005. Core transcriptional regulatory circuitry in human embryonic stem cells. *Cell* 122: 947–956.

Branco, M. R. and 10 others. 2016. Maternal DNA methylation regulates early trophoblast development. *Dev. Cell* 36: 152–163.

Brauckmann, S. 2006. August Rauber (1841–1917): From the primitive streak to *Cellularmechanik*. *Int. J. Dev. Biol.* 50: 439–449.

Braude, P., V. Bolton and S. Moore. 1988. Human gene expression first occurs between the 4- and 8-cell stages of preimplantation development. *Nature* 332: 459–461.

Brennan, J., C. C. Lu, D. P. Norris, T. A. Rodriguez, R. S. Beddington and E. J. Robertson. 2001. Nodal signalling in the epiblast patterns the early mouse embryo. *Nature* 411: 965–969.

Bruce, A. W. and M. Zernicka-Goetz. 2010. Developmental control of the early mammalian embryo: Competition among heterogeneous cells that biases cell fate. *Curr. Opin. Genet. Dev.* 20: 485–491.

Burdsal, C. A., C. H. Damsky and R. A. Pedersen. 1993. The role of E-cadherin and integrins in mesoderm differentiation and migration at the mammalian primitive streak. *Development* 118: 829–844.

Burke, A. C., C. E. Nelson, B. A. Morgan and C. Tabin. 1995. Hox genes and the evolution of vertebrate axial morphology. *Development* 121: 333–346.

Callebaut, M., E. Van Nueten, F. Harrisson and H. Bortier. 2004. Induction and improved embryonic development by the nucleus of Pander in associated blastoderm parts: Delta or gamma ooplasm. *J. Morphol.* 260: 201–208.

Carroll, S. B. 1995. Homeotic genes and the evolution of arthropods and chordates. *Nature* 376: 479–485.

Carter, A. M. 2018. Classics revisited: Miguel Fernández on germ layer inversion and specific polyembryony in armadillos. *Placenta*. 61: 55–60.

Chan, M. M. and 13 others. 2019. Molecular recording of mammalian embryogenesis. *Nature* 570: 77–82.

Chapman, S. C., K. Matsumoto, Q. Cai and G. C. Schoenwolf. 2007. Specification of germ layer identity in the chick gastrula. *BMC Dev. Biol.* 7: 91–107.

Chazaud, C., Y. Yamanaka, T. Pawson and J. Rossant. 2006. Early lineage segregation between epiblast and primitive endoderm in mouse blastocysts through the Grb2-MAPK pathway. *Dev. Cell* 10: 615–624.

Ciruna, B. and J. Rossant. 2001. FGF signaling regulates mesoderm cell fate specification and morphogenetic movement at the primitive streak. *Dev. Cell* 1: 37–49.

Collignon, J., I. Varlet and E. J. Robertson. 1996. Relationship between asymmetric nodal expression and the direction of embryonic turning. *Nature* 381: 155–158.

Coolen, M. and 7 others. 2008. Molecular characterization of the gastrula in the turtle *Emys orbicularis*: An evolutionary perspective on gastrulation. *PLoS One* 3(7): e2676.

Cui, C., C. D. Little and B. J. Rongish. 2009. Rotation of organizer tissue contributes to left-right asymmetry. *Anat. Rec.* 292: 557–561.

Darnell, D. K., M. R. Stark and G. C. Schoenwolf. 1999. Timing and cell interactions underlying neural induction in the chick embryo. *Development* 126: 2505–2514.

Deschamps, J. and J. van Nes. 2005. Developmental regulation of the Hox genes during axial morphogenesis in the mouse. *Development* 132: 2931–2942.

DeVeale, B. and 11 others. 2013. Oct4 is required ~E7.5 for proliferation in the primitive streak. *PLoS Genet.* 9: e1003957.

Dias, A. and 8 others. 2020. A Tgfb β 1/Snail-dependent developmental module at the core of vertebrate axial elongation. *eLife* 9: e56615.

Dietrich, J.-E. and T. Hiragi. 2007. Stochastic patterning in the mouse pre-implantation embryo. *Development* 134: 4219–4231.

Diez del Corral, R., I. Olivera-Martinez, A. Goriely, E. Gale, M. Maden and K. Storey. 2003. Opposing FGF and retinoid pathways control ventral neural pattern, neuronal differentiation, and segmentation during body axis extension. *Neuron* 40: 65–79.

Dobson, A. T. and 6 others. 2004. The unique transcriptome through day 3 of human preimplantation development. *Hum. Mol. Genet.* 13: 1461–1470.

Dubrow, T. J., P. A. Wackym and M. A. Lesavoy. 1988. Detailing the human tail. *Ann. Plastic Surg.* 20: 340–344.

Ducibella, T., D. F. Albertini, E. Anderson and J. D. Biggers. 1975. The preimplantation mammalian embryo: Characterization of intercellular junctions and their appearance during development. *Dev. Biol.* 45: 231–250.

Dyce, J., M. George, H. Goodall and T. P. Fleming. 1987. Do trophectoderm and inner cell mass cells in the mouse blastocyst maintain discrete lineages? *Development* 100: 685–698.

Ekkert, J. J., A. McCallum, A. Mears, M. G. Rumsby, I. T. Cameron and T. P. Fleming. 2004. Specific PKC isoforms regulate blastocoel formation during mouse preimplantation development. *Dev. Biol.* 274:384–401.

Enders, A. C. 2002. Implantation in the 9-banded armadillo: How does a single blastocyst form four embryos? *Placenta* 23: 71–85.

Eyal-Giladi, H. 1991. The early embryonic development of the chick, an epigenetic process. *Crit. Rev. Poultry Biol.* 3: 143–166.

Eyal-Giladi, H. 1997. Establishment of the axis in chordates: Facts and speculations. *Development* 124: 2285–2296.

Eyal-Giladi, H., A. Debby and N. Harel. 1992. The posterior section of the chick's area pellucida and its involvement in hypoblast and primitive streak formation. *Development* 116: 819–830.

Fallon, J. F. and B. K. Simandl. 1978. Evidence of a role for cell death in the disappearance of the embryonic human tail. *Am. J. Anat.* 152: 111–129.

Fleming, T. P. 1987. A quantitative analysis of cell allocation to trophectoderm and inner cell mass in the mouse blastocyst. *Dev. Biol.* 119: 520–531.

Fleming, T. P., B. Sheth and I. Fesenko. 2001. Cell adhesion in the preimplantation mammalian embryo and its role in trophectoderm differentiation and blastocyst morphogenesis. *Front. Biosci.* 6: d1000–1007.

Foley, A. C., I. Skromne and C. D. Stern. 2000. Reconciling different models of forebrain induction and patterning: A dual role for the hypoblast. *Development* 127: 3839–3854.

Forlani, S., K. A. Lawson and J. Deschamps. 2003. Acquisition of Hox codes during gastrulation and axial elongation in the mouse embryo. *Development* 130: 3807–3819.

Fu, Y., W, Yan, T. J. Mohun and S. M. Evans. 1998. Vertebrate *tinman* homologues *XNkx2-3* and *XNkx2-5* are required for heart formation in a functionally redundant manner. *Development* 125: 4439–4449.

Gaunt, S. J. 1994. Conservation in the Hox code during morphological evolution. *Int. J. Dev. Biol.* 38: 549–552.

Gilland, E. H. and A. C. Burke. 2004. Gastrulation in reptiles. In C. D. Stern (ed.), *Gastrulation: From Cells to Embryo*. Cold Spring Harbor Press, Cold Spring Harbor, NY, pp. 205–217.

Goedel, A. and F. Lanner. 2021. A peek into the black box of human embryology. *Nature* 600: 223–224.

Gros, J., K. Feistel, C. Viebahn, M. Blum and C. J. Tabin. 2009. Cell movements at Hensen's node establish left/right asymmetric gene expression in the chick. *Science* 324: 941–944.

Guerreiro, I. and 8 others. 2013. Role of a polymorphism in a Hox/Pax-responsive enhancer in the evolution of the vertebrate spine. *Proc. Natl. Acad. Sci. USA* 110: 10682–10686.

Guillot, C., Y. Djeflal, A. Michaut, B. Rabe and O. Pourquié. 2021. Dynamics of primitive streak regression controls the fate of neuromesodermal progenitors in the chicken embryo. *Elife* 10: e64819.

Guirao, B. and 14 others. 2010. Coupling between hydrodynamic forces and planar cell polarity orients mammalian motile cilia. *Nature Cell Biol.* 12: 341–350.

Gulyas, B. J. 1975. A reexamination of the cleavage patterns in eutherian mammalian eggs: Rotation of the blastomere pairs during second cleavage in the rabbit. *J. Exp. Zool.* 193: 235–248.

Gunter, C. and R. Dhand. 2002. Human biology by proxy. *Nature* 420: 509.

Hall, B. K. 2003. Francis Maitland Balfour (1851–1882): A founder of evolutionary embryology. *J. Exp. Zool. (Mol. Dev. Evol.)* 299: 3–8.

Hashimoto, M. and 10 others. 2010. Planar polarization of node cells determines the rotational axis of node cilia. *Nature Cell Biol.* 12: 170–176.

Hueber, S. D., G. F. Weiller, M. A. Djordjevic and T. Frickey. 2010. Improving Hox protein classification across the major model organisms. *PLoS One* 5: e10820.

Hiiragi, T. and D. Solter. 2004. First cleavage plane of the mouse egg not predetermined but defined by the topology of the two apposing nuclei. *Nature* 430: 360–364.

Hiramatsu, R. and 7 others. 2013. External mechanical cues trigger the establishment of the anterior-posterior axis in early mouse embryos. *Dev. Cell* 27: 131–144.

Holmdahl, D. E. 1925. Experimentelle Untersuchungen über die Lage der Grenze primärer und sekundärer Körperentwicklung beim Huhn. *Anat. Anz.* 59: 393–396

Holub, M. 1990. From the intimate life of nude mice. In *The Dimension of the Present Moment*. Trans. D. Habova and D. Young. Faber and Faber: London.

Horner, J. and J. Gorman. 2010. *How to Build a Dinosaur: The New Science of Reverse Evolution*. Plume/Penguin USA.

Hume, C. R. and J. Dodd. 1993. *Cwnt-8C*: A novel Wnt gene with a potential role in primitive streak formation and hindbrain organization. *Development* 119: 1147–1160.

Hunt, P. and R. Krumlauf. 1991. Deciphering the Hox code: Clues to patterning branchial regions of the head. *Cell* 66: 1075–1078.

Hunt, P. and R. Krumlauf. 1992. Hox codes and positional specification in vertebrate embryonic axes. *Annu. Rev. Cell Biol.* 8: 227–256.

Jurand, A. 1974. Some aspects of the development of the notochord in mouse embryos. *J. Embryol. Exp. Morphol.* 32: 1–33.

Kagey, M. H. and 12 others. 2010. Mediator and cohesin connect gene expression and chromatin architecture. *Nature* 467: 430–435.

Kajikawa, E. and 11 others. 2020. Nodal paralogues underlie distinct mechanisms for visceral left-right asymmetry in reptiles and mammals. *Nat. Ecol. Evol.* 4: 261–269.

Kawachi, T., E. Shimokita, R. Kudo, R. Tadokoro and Y. Takahashi. 2020. Neural-fated self-renewing cells regulated by Sox2 during secondary neurulation in chicken tailbud. *Dev. Biol.*

461: 160–171.

Kawagishi, R., M. Tahara, K. Sawada, K. Morishige, M. Sakata, K. Tasaka and Y. Murata. 2004. Na⁺/H⁺ exchanger-3 is involved in mouse blastocyst formation. *J. Exp. Zool.* 301A: 767–775.

Keynes, R. and A. Lumsden. 1990. Segmentation and the origin of regional diversity in the vertebrate central nervous system. *Neuron* 4: 1–9.

Khaner, O. 1998. The ability to initiate an axis in the avian blastula is concentrated mainly at a posterior site. *Dev. Biol.* 194: 257–266.

Khaner, O. 2007a. Morphogenetic mechanisms for axis formation in the avian embryo: A morphological approach. *Trends Dev. Biol.* 2: 35–69.

Khaner, O. 2007b. The importance of the posterior midline region for axis initiation at early stages of the avian embryo. *Int. J. Dev. Biol.* 51: 131–137.

Khaner, O. and H. Eyal-Giladi 1989. The chick's marginal zone and primitive streak formation. I. Coordinative effect of induction and inhibition. *Dev. Biol.* 134: 206–214.

Kimelman, D. 2016. Tales of tails (and trunks): forming the posterior body in vertebrate embryos. *Curr. Top. Dev. Biol.* 116: 517–536.

Kmita, M. and D. Duboule 2003. Organizing axes in time and space: 25 years of collinear tinkering. *Science* 301: 331–333.

Koch, F. and 8 others. 2017. Antagonistic activities of Sox2 and brachyury control the fate choice of neuro-mesodermal progenitors. *Dev. Cell* 42:514–526.

Kochav, S. M. and H. Eyal-Giladi. 1971. Bilateral symmetry in the chick embryo determination by gravity. *Science* 171: 1027–1029.

Kosaki, K. and B. Casey. 1998. Genetics of human left-right axis malformations. *Semin. Cell Dev.* 9: 89–99.

Kurokawa, D. N. Takasaki, H. Kiyonari, R. Nakayama, C. Kimura-Yoshida, I. Matsuo and S. Aizawa. 2004. Regulation of *Otx2* expression and its functions in mouse epiblast and anterior

neuroectoderm. *Development* 131: 3307–3317.

Kurotaki, Y., K. Hatta, K. Nakao, Y. Nabeshima and T. Fujimori. 2007. Blastocyst axis is specified independently of early cell lineage but aligns with the ZP shape. *Science* 316: 719–723.

Kwon, G. S., M. Viotti and A. K. Hadjantonakis. 2008. The endoderm of the mouse embryo arises by dynamic widespread intercalation of embryonic and extraembryonic lineages. *Dev. Cell.* 15: 509–520.

Larsen, W. J. 1993. *Human Embryology*. Churchill Livingstone, New York.

Lash, J. W., E. Gosfield III, D. Ostrovsky and R. Bellairs. 1990. Migration of chick blastoderm under the vitelline membrane: The role of fibronectin. *Dev. Biol.* 139: 407–416.

Lawson, A. and G. C. Schoenwolf. 2001a. New insights into critical events of avian gastrulation. *Anat. Rec.* 262: 238–252.

Lawson, A. and G. C. Schoenwolf. 2001b. Cell populations and morphogenetic movements underlying formation of the avian primitive streak. *Genesis* 29: 188–195.

Lee, H. C. and 9 others. 2013. Cleavage events and sperm dynamics in chick intrauterine embryos. *PLoS One* 8(11):e80631.

Levin, M., R. L. Johnson, C. D. Stern, M. Kuehn and C. Tabin. 1995. A molecular pathway determining left-right asymmetry in chick embryogenesis. *Cell* 82: 803–814.

Lin, C. R. and 7 others. 1999. Pitx2 regulates lung asymmetry, cardiac positioning, and pituitary and tooth morphogenesis. *Nature* 401: 279–282.

Liu, F. and 31 others. 2012. A genome-wide association study identifies five loci influencing facial morphology in Europeans. *PLoS Genet.* 8(9):e1002932.

Liu, J.-P. 2006. The function of growth/differentiation factor 11 (Gdf11) in rostrocaudal patterning of the developing spinal cord. *Development* 133: 2865–2874.

Logan, M., H.-H. Simon and C. Tabin. 1998. Differential regulation of T-box and homeobox transcription factors suggests roles in controlling chick limb-type identity. *Development* 125:

2825–2835.

Lowe, L. A. and 8 others. 1996. Conserved left-right asymmetry of *nodal* expression and alterations in murine *situs inversus*. *Nature* 381: 158–161.

Luckett, W. P. 1978. Origin and differentiation of the yolk sac and extraembryonic mesoderm in presomite human and rhesus monkey embryos. *Am. J. Anat.* 152: 59–97.

Mallo, M. 2018. Reassessing the role of Hox genes during vertebrate development and evolution. *Trends Genet.* 34: 209–217.

Mallo M. 2020. The vertebrate tail: A gene playground for evolution. *Cell. Mol. Life Sci.* 77: 1021–1030.

Marson, A. and 19 others. 2008. Connecting microRNA genes to the core transcriptional regulatory circuitry of embryonic stem cells. *Cell* 134: 521–533.

Matsubara, Y. and 10 others. 2017. Anatomical integration of the sacral-hindlimb unit coordinated by GDF11 underlies variation in hindlimb positioning in tetrapods. *Nature Ecol. Evol.* 1: 1392–1399.

McDole, K., Y. Xiong, P. A. Iglesias and Y. Zheng. 2011. Lineage mapping the pre-implantation mouse embryo by two-photon microscopy, new insights into the segregation of cell fates. *Dev. Biol.* 355: 239–249.

McGinnis, W. and R. Krumlauf. 1992. Homeobox genes and axial patterning. *Cell* 68: 283–302.

Meno, C. and 7 others. 1996. Left-right asymmetric expression of the TGF-beta family member *lefty* in mouse embryos. *Nature* 381: 151–155.

Miller, S. A. and A. Briglin. 1996. Apoptosis removes chick embryo tail gut and remnant of the primitive streak. *Dev. Dyn.* 206: 212–218.

Mitrani, E., T. Ziv, G. Thomsen, Y. Shimoni, D. A. Melton and A. Bril. 1990. Activin can induce the formation of axial structures and is expressed in the hypoblast of the chick. *Cell* 63: 495–501.

Monsoro-Burq, A. H. and M. Levin. 2018. Avian models and the study of invariant asymmetry: How the chicken and the egg taught us to tell right from left. *Int. J. Dev. Biol.* 62: 63–77.

Morris, S. A., R. T. Teo, H. Li, P. Robson, D. M. Glover and M. Zernicka-Goetz. 2010. Origin and formation of the first two distinct cell types of the inner cell mass in the mouse embryo. *Proc. Natl. Acad. Sci. USA* 107: 6364–6369.

Motosugi, N., T. Bauer, Z. Polanski and T. Hiiragi. 2005. Polarity of the mouse embryo is established at blastocyst and is not prepatterned. *Genes Dev.* 19: 1081–1092.

Mulnard, J. G. 1967. Analyse microcinematographique du developpement de l'oeuf de souris du stade II au blastocyste. *Arch. Biol. (Liege)* 78: 107–138.

Nagai, H. and 9 others. 2015. Cellular analysis of cleavage-stage chick embryos reveals hidden conservation in vertebrate early development. *Development* 142: 1279–1286.

Nakaya, Y. and G. Sheng. 2009. An amicable separation: Chick's way of doing EMT. *Cell Adhes. Migr.* 3: 160–163.

Neijts, R., S. Amin, C. van Rooijen, S. Tan, M. P. Crayghton, W. de Laat and J. Deschamps. 2016. Polarized regulatory landscape and Wnt responsiveness underlie Hox activation in embryos. *Genes Dev.* 30: 1937–1942.

New, D. A. T. 1956. The formation of subblastodermic fluid in hens' eggs. *J. Embryol. Exp. Morphol.* 43: 221–227.

New, D. A. T. 1959. Adhesive properties and expansion of the chick blastoderm. *J. Embryol. Exp. Morphol.* 7: 146–164.

Nishioka, N. and 17 others. 2009. The Hippo signaling components Lats and Yap pattern *Tead4* activity to distinguish mouse trophectoderm from inner cell mass. *Dev. Cell* 16: 398–410.

Niswander, L. and Martin, G. R. 1992. *Fgf4* expression during gastrulation, myogenesis, limb, and tooth development in the mouse. *Development* 114: 755–768.

Niwa, H., Y. Toyooka, D. Shimosato, D. Strumpf, K. Takahashi, R. Yagi and J. Rossant. 2005. Interaction between Oct3/4 and Cdx2 determines trophectoderm differentiation. *Cell* 123: 917–929.

Nonaka, S. and 7 others. 1998. Randomization of left-right asymmetry due to loss of nodal cilia generating leftward flow of extraembryonic fluid in mice lacking KIF3B motor protein. *Cell* 95: 829–837.

Nonaka, S., H. Shiratori, Y. Saijoh and H. Hamada. 2002. Determination of left-right patterning in the mouse by artificial nodal flow. *Nature* 418: 96–99.

Norris, D. P., J. Brennan, E. K. Bikoff and E. J. Robertson. 2002. The Foxh1-dependent autoregulatory enhancer controls the level of Nodal signals in the mouse embryo. *Development* 129: 3455–3468.

Nowotschin, S. and 7 others. 2013. The T-box transcription factor eomesodermin is essential for AVE induction in the mouse embryo. *Genes Dev.* 27: 997–1002.

O’Sullivan, C. M., S. L. Rancourt, S. Y. Liu and D. E. Rancourt. 2001. A novel murine tryptase involved in blastocyst hatching and outgrowth. *Reproduction* 122: 61–71.

Otto, A., T. Pieper, C. Viebahn and N. Tsikolia. 2014. Early left-right asymmetries during axial morphogenesis in the chick embryo. *Genesis* 52: 614–625.

Pedersen, R. A., K. Wu and H. Batakier. 1986. Origin of the inner cell mass in mouse embryos: Cell lineage analysis by microinjection. *Dev. Biol.* 117: 581–595.

Pera, M. and M. Kessel. 1997. Patterning of the chick forebrain anlage by the prechordal plate *Development* 124: 4153–4162.

Perea-Gomez, A., M. Rhinn and S.-L. Ang. 2001. Role of the anterior visceral endoderm in restricting posterior signals in the mouse embryo. *Int. J. Dev. Biol.* 45: 311–320.

Perea-Gomez, A. and 11 others. 2002. Nodal antagonists in the anterior visceral endoderm prevent the formation of multiple primitive streaks. *Dev. Cell* 3: 745–756.

Perona, R. M. and P. M. Wassarman. 1986. Mouse blastocysts hatch in vitro by using a trypsin-like proteinase associated with cells of mural trophoctoderm. *Dev. Biol.* 114: 42–52.

Peyrieras, N., F. Hyafil, D. Louvard, H. L. Ploegh and F. Jacob. 1983. Uvomorulin: A non-integral membrane protein of early mouse embryos. *Proc. Natl. Acad. Sci. USA* 80: 6274–6277.

Pijuan-Sala, B. and 15 others. 2019. A single-cell molecular map of mouse gastrulation and early organogenesis. *Nature* 566: 490–495.

Pikó, L. and K. B. Clegg. 1982. Quantitative changes in total RNA, total poly(A), and ribosomes in early mouse embryos. *Dev. Biol.* 89: 362–378.

Piotrowska, K. and M. Zernicka-Goetz. 2001. Role for sperm in spatial patterning of the early mouse embryo. *Nature* 409: 517–521.

Psychoyos, D. and C. D. Stern. 1996. Fates and migratory routes of primitive streak cells in the chick embryo. *Development* 122: 1523–1534.

Ralston, A. and J. Rossant. 2005. Genetic regulation of stem cell origins in the mouse embryo. *Clin. Genet.* 68: 106–112.

Ralston, A. and J. Rossant. 2008. Cdx2 acts downstream of cell polarization to cell-autonomously promote trophoderm fate in the early mouse embryo. *J. Dev. Biol.* 313: 614–629.

Rashid, D. J. and 7 others. 2014. From dinosaurs to birds: a tail of evolution. *Evodevo* 5: 25.

Rauber, A. 1876. *Über die Stellung des Hünchens im Entwicklungsplan*. Englemann, Leipzig.

Rodriguez-Esteban, C., J. Capdevilla, A. N. Economides, J. Pascual, A. Ortiz and J. C. Izpisua-Belmonte. 1999. The novel Cer-like protein Caronte mediates the establishment of embryonic left-right asymmetry. *Nature* 401: 243–251.

Rosenquist, G. C. 1966. A radioautographic study of labeled grafts in the chick blastoderm: Development from primitive-streak stages to stage 12. *Carnegie Inst. Wash. Contrib. Embryol.* 38: 31–110.

Rosenquist, G. C. 1972. Endoderm movements in the chick embryo between the early short streak and head process stages. *J. Exp. Zool.* 180: 95–103.

Rossant, J. 2016. Making the mouse blastocyst: Past, present and future. *Curr. Top. Dev. Biol.* 116: 275–288.

Rostovskaya, M., S. Andrews, W. Reik and P. J. Rugg-Gunn. 2022. Amniogenesis occurs in two independent waves in primates. *Cell Stem Cell* 29: 744–759.e6.

Rother, F. and 11 others. 2011. Importin $\alpha 7$ is essential for zygotic genome activation and early mouse development. *PLoS One* 6(3): e18310.

Ryan, A. K. and 14 others. 1998. Pitx2 determines left-right asymmetry of internal organs in vertebrates. *Nature* 394: 545–551.

Saito, D. and 10 others. 2022. Stiffness of primordial germ cells is required for their extravasation in avian embryos. *iScience* 25: 105629.

Sanders, E. J., M. K. Khare, V. C. Ooi and R. Bellairs. 1986. An experimental and morphological analysis of the tail bud mesenchyme of the chick embryo. *Anat. Embryol.* (Berlin) 174: 179–185.

Schlesinger, A. B. 1958. The structural significance of the avian yolk in embryogenesis. *J. Exp. Zool.* 138: 223–258.

Schlueter, J. and T. Brand. 2009. A right-sided pathway involving Fgf8/snail controls asymmetric development of the proepicardium in the chick embryo. *Proc. Natl. Acad. Sci USA* 106: 7485–7490.

Schoenwolf, G. C. 1991. Cell movements in the epiblast during gastrulation and neurulation in avian embryos. In R. Keller, W. H. Clark, Jr. and F. Griffin (eds.), *Gastrulation: Movements, Patterns, and Molecules*. Plenum, New York, pp. 1–28.

Schoenwolf, G. C., V. Garcia-Martinez and M. S. Diaz. 1992. Mesoderm movement and fate during amphibian gastrulation and neurulation. *Dev. Dynam.* 193: 235–248.

Scott, M. 1992. Vertebrate homeobox gene nomenclature. *Cell* 71: 551–553.

Seleiro, E. A. P., D. J. Connolly and J. Cooke. 1996. Early developmental expression and experimental axis determination by the chicken *Vgl* gene. *Curr. Biol.* 6: 1476–1486.

Serra, M., S. Streichan, M. Chuai, C. J. Weijer and L. Mahadevan. 2020. Dynamic morphoskeletons in development. *Proc. Natl. Acad. Sci. USA* 117: 11444–11449.

Serrano Nájera, G. and C. J. Weijer. 2020. Cellular processes driving gastrulation in the avian embryo. *Mech. Dev.* 163:103624.

Sheng, G. 2014. Day-1 chick development. *Dev. Dyn.* 243: 357–367.

Sheng, G., A. Martinez Arias and A. Sutherland. 2021. The primitive streak and cellular principles of building an amniote body through gastrulation. *Science* 374: abg1727.

Simeone, A. 2004. Role of Otx2 during gastrulation. In C. D. Stern (ed.), *Gastrulation: From Cell to Embryo*. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY pp. 553–561.

Skromne, I. and C. D. Stern. 2002. A hierarchy of gene expression accompanying induction of the primitive streak by Vg1 in the chick embryo. *Mech. Dev.* 114: 115–118.

Smith, J. L. and G. C. Schoenwolf. 1998. Getting organized: New insights into the organizer of higher vertebrates. *Curr. Top. Dev. Biol.* 40: 79–110.

Smith, Z. D. and 7 others. DNA methylation dynamics of the human preimplantation embryo. *Nature* 511: 611–615.

Solnica-Krezel, L. 2005. Conserved patterns of cell movements during vertebrate gastrulation. *Curr. Biol.* 15: R213–R228.

Solursh, M. and J. P. Revel. 1978. A scanning electron microscope study of cell shape and cell appendages in the primitive streak region of the rat and chick embryo. *Differentiation* 11: 185–190.

Spratt, N. T., Jr. 1963. Role of the substratum, supracellular continuity, and differential growth in morphogenetic cell movements. *Dev. Biol.* 7: 51–63.

Spratt, N. T., Jr. and H. Haas. 1960. Integrative mechanisms in development of early chick blastoderm. I. Regulated potentiality of separate parts. *J. Exp. Zool.* 145: 97–138.

Srinivas, S., T. Rodriguez, M. Clements, J. C. Smith and R. S. P. Beddington. 2004. Active cell migration drives the unilateral movements of the anterior visceral endoderm *Development* 131:

1157–1164.

Stern, C. D. 2004. Gastrulation in the chick. In C. D. Stern (ed.), *Gastrulation: From Cells to Embryo*. Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY pp. 219–232.

Stern, C. D. 2005a. The chick: A great model system becomes even greater. *Dev. Cell* 8: 9–17.

Stern, C. D. 2005b. Neural induction: Old problem, new findings, yet more questions. *Development* 132: 2007–2021.

Stower, M. J. and 8 others. 2015. Bimodal strategy of gastrulation in reptiles. *Dev. Dyn.* 2015 Jun 112. doi: 10.1002/dvdy.24300.

Streit, A., A. J. Berliner, C. Papanayotou, A. Sirulnik and C. D. Stern. 2000. Initiation of neural induction by FGF signalling before gastrulation. *Nature* 406: 74–78.

Sulik, K., D. B. Dehart, J. L. Carson, T. Vrablic, K. Gesteland and G. C. Schoenwolf. 1994. Morphogenesis of the murine node and notochordal plate. *Dev. Dynam.* 201: 260–278.

Sun, X., E. N. Meyers, M. Lewandoski and G. R. Martin. 1999. Targeted disruption of Fgf8 causes failure of cell migration in the gastrulating mouse embryo. *Genes Dev.* 13: 1834–1846.

Takaoka, K., H. Nishimura and H. Hamada. 2017. Both Nodal signalling and stochasticity select for prospective distal visceral endoderm in mouse embryos. *Nat. Commun.* 8: 1–3.

Tanaka, S., T. Kunath, A.-K. Hadjantonakis, A. Nagy and J. Rossant. 1998. Promotion of trophoblast stem cell proliferation by Fgf4. *Science* 282: 2072–2075.

Tojima, S., H. Makishima, T. Takakuwa and S. Yamada. 2018. Tail reduction process during human embryonic development. *J. Anat.* 232: 806–811.

Torlopp, A. and 6 others. 2014. The transcription factor Pitx2 positions the embryonic axis and regulates twinning. *Elife* 3: e03743.

Tschopp, P. and D. Duboule. 2011. A regulatory “landscape effect” over the HoxD cluster. *Dev. Biol.* 351: 288–296.

Tsikolia, N., S. Schröder, P. Schwartz and C. Viebahn. 2012. Paraxial left-sided nodal expression and the start of left-right patterning in the early chick embryo. *Differentiation* 84: 380–391.

Tzouanacou, E., A. Wegener, F. J. Wymeersch, V. Wilson and J. F. Nicolas. 2009. Redefining the progression of lineage segregations during mammalian embryogenesis by clonal analysis. *Dev. Cell* 17: 365–376.

Vanderberg, L. N. and M. Levin. 2013. A unified model for left-right asymmetry? Comparison and synthesis of molecular models of embryonic laterality. *Dev. Biol.* 379: 1–15.

Voiculescu, O., F. Bertocchini, L. Wolpert, R. E. Keller and C. D. Stern. 2007. The amniote primitive streak is defined by epithelial cell intercalation before gastrulation. *Nature*. 449: 1049–1052.

Voiculescu, O., L. Bodenstein, I. J. Lau and C. D. Stern. 2014. Local cell interactions and self-amplifying individual cell ingress drive amniote gastrulation. *Elife* 21;3:e01817.

Waddington, C. H. 1933. Induction by the primitive streak and its derivatives in the chick. *J. Exp. Zool.* 10: 38–46.

Wallingford, M. C., J. R. Angelo and J. Mager. 2013. Morphogenetic analysis of peri-implantation development. *Dev. Dyn.* 242: 1110–1120.

Wellik, D. M. 2009. Hox genes and vertebrate axial pattern. *Curr. Top. Dev. Biol.* 88: 257–278.

Wellik, D. M. and M. R. Capecchi. 2003. *Hox10* and *Hox11* genes are required to globally pattern the mammalian skeleton. *Science* 301: 363–367.

Wilkinson, D. G., S. Bhatt, M. Cook, E. Boncinelli and R. Krumlauf. 1989. Segmental expression of Hox-2 homeobox-containing genes in the developing mouse hindbrain. *Nature* 341: 405–409.

Williams, M., C. Burdsal, A. Periasamy, M. Lewandoski and A. Sutherland. 2012. Mouse primitive streak forms in situ by initiation of epithelial to mesenchymal transition without migration of a cell population. *Dev. Dyn.* 241: 270–283.

Wilson, V., I. Olivera-Martinez and K. G. Storey. 2009. Stem cells, signals, and vertebrate body axis extension. *Development* 136: 1591–1604.

Wolpert, L., R. Beddington, J. Brockes, T. Jessell, P. Lawrence and E. Meyerowitz. 1998. *Principles of Development*. Current Biology Ltd., London.

Xia, B. and 11 others. 2021. The genetic basis of tail-loss evolution in humans and apes bioRxiv.09.14.460388 (preprint).

Xu, J. S. and 6 others. 2004. Embryotrophic factor-3 from human oviductal cells enhances proliferation, suppresses apoptosis and stimulates the expression of the b-1 subunit of sodium-potassium ATPase in mouse embryos. *Hum. Reprod.* 19: 2919–2926.

Yamamoto, M. and 7 others. 2004. Nodal antagonists regulate formation of the anteroposterior axis of the mouse embryo. *Nature* 428: 387–392.

Yang, X., D. Dormann, A. E. Münsterberg and C. J. Weijer. 2002. Cell movement patterns during gastrulation in the chick are controlled by positive and negative chemotaxis mediated by Fgf4 and Fgf8. *Dev. Cell* 3: 425–437.

Yoshida, S. and 14 others. 2012. Cilia at the node of mouse embryos sense fluid flow for left-right determination via Pkd2. *Science* 338: 226–231.

Young, R. A. 2011. Control of embryonic stem cell state. *Cell* 144: 940–954.

Yu, X., F. He, T. Zhang, R. A. Espinoza-Lewis, L. Lin, J. Yang and Y. Chen. 2008. Cerberus functions as a BMP agonist to synergistically induce nodal expression during left-right axis determination in the chick embryo. *Dev. Dyn.* 237: 3613–3623.

Zeng, F. and R. M. Schultz. 2005. RNA transcript profiling during zygotic gene activation in the preimplantation mouse embryo. *Dev. Biol.* 283: 40–57.