# Embryonic development of the hirudinid leech Hirudo medicinalis: Structure, development and segmentation of the germinal plate

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The germinal plate of 5- to 12-day-old embryos of the leech Hirudo medicinalis consists of an anterior and a posterior sector that differ both structurally and developmentally. The posterior sector includes the five pairs of teloblasts and five paired longitudinal bandlets of stem cells and their descendant blast cells. The mesoteloblast pair and their descendant cells of the m bandlet divide spirally and give rise to bilaterally paired cell clusters. The four ectoteloblast pairs and their descendant cells of the n, o, p and q bandlet pairs divide unidirectionally and give rise to paired one-cell-chick and four-cell-wide ectodermal arches. The developmentally more advanced anterior sector of the germinal plate consists of differentiating ectodermal and mesodermal cells engaged in organogenesis. The mesodermal cell clusters develop into somites, whereas the expanding ectodermal arches develop into nerve cord ganglia and epidermis. Rostrocaudal expansion of somite tissue results in the f