Blastula Encyclopedia Article

Blastula

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Blastula

A blastula is an early embryo that has been formed by cleavage, or subdivision, of a fertilized egg. The fertilized egg, also known as a zygote, undergoes cell division that partitions the zygote into smaller and smaller cells. Blastula formation is characteristic of only certain species. A classic example of a species that forms a blastula is the common leopard frog of North America, *Rana pipiens*. Chickens do not have a blastula stage due to the extreme amount of yolk in their eggs. Microscopic chick embryo cells cannot cleave the yolk mass. Instead of a blastula, a thin layer of cells forms on the surface of the yolk known as the blastoderm. Humans form a blastocyst which is not comparable to the amphibian blastula. The blastocyst of humans (and most other mammals) contains an inner cell mass which is comparable to the blastula. Blastula cells are not considered to have undergone differentiation. This means that the cells are not yet specialized as they are in an adult body. The onset of differentiation ordinarily occurs with gastrula formation which follows the blastula stage.