Comparative genomics of molluscs

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Homeobox genes are involved in various aspects of the development of multicellular animals, including anterior-posterior patterning of the body plan. We performed a genomic survey of homeobox genes in the Japanese pearl oyster, Pinctada fucata. We annotated 92 homeobox-containing genes and 5 homeobox-less Pax genes. This species possesses ten or eleven Hox genes. However, most of them are encoded in different scaffolds, and thus we did not obtain evidence for clustering of these genes. We annotated another homeobox genes that cover 77 out of the 111 gene families identified in the amphioxus genome. Investigation of these repertoires of homeobox genes will shed new light on the relatively less well known lophotrochozoan development.

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