EVOLUTION OF NEURAL INDUCTION IN CHORDATES: AN AMPHIOXUS VIEW

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Salón de Grados de la Facultad de Matemáticas
Campus de Burjassot/Paterna-Universitat de València

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How, by using similar genetic tools, a single cell may develop to give so many different body shapes in metazoans? This question can only be answered through comparative approaches between different animals. Since the body shape is established during the embryonic development, comparisons have to be performed between embryos of different evolutionary lineages (Evo-Devo). Our team is particularly interested in the evolution of the body shape and body structures during the invertebrate-chordate to vertebrate transition. Our animal model is the cephalochordate amphioxus, a living fossil placed at the base of the chordate lineage. It keeps all the morphological characteristics defining the chordate lineage (dorsal hollow nerve chord, dorsal notochord, pharyngeal gill slits, etc) but is extremely simple, both at the anatomical and at the genomic levels.