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*hmmr* mediates anterior neural tube closure and morphogenesis in the frog *Xenopus*

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## Abstract

Development of the central nervous system requires orchestration of morphogenetic processes which drive elevation and apposition of the neural folds and their fusion into a neural tube. The newly formed tube gives rise to the brain in anterior regions and continues to develop into the spinal cord posteriorly. Conspicuous differences between the anterior and posterior neural tube become visible already during neural tube closure (NTC). Planar cell polarity (PCP) -mediated convergent extension (CE) movements are restricted to the posterior neural plate, i.e. hindbrain and spinal cord, where they propagate neural fold apposition. The lack of CE in the anterior neural plate correlates with a much slower mode of neural fold apposition anteriorly. The morphogenetic

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