

# Xiro, a *Xenopus* homolog of the *Drosophila* Iroquois complex genes, controls development at the neural plate

Gómez-Skarmeta, José Luis

Glavic, Alvaro

De La Calle-Mustienes, Elisa

Modolell, Juan

Mayor, Roberto

The *Drosophila* homeoproteins Ara and Caup are members of a combination of factors (prepattern) that control the highly localized expression of the proneural genes *achaete* and *scute*. We have identified two *Xenopus* homologs of *ara* and *caup*, Xiro1 and Xiro2. Similarly to their *Drosophila* counterparts, they control the expression of proneural genes and, probably as a consequence, the size of the neural plate. Moreover, Xiro1 and Xiro2 are themselves controlled by *noggin* and retinoic acid and, similarly to *ara* and *caup*, they are overexpressed by expression in *Xenopus* embryos of the *Drosophila cubitus interruptus* gene. These and other findings suggest the conservation of at least part of the genetic cascade that regulates proneural genes, and the existence in vertebrates of a prepattern of factors important to control the differentiation of the neural plate.