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Laying down the jaw

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The *Dlx* gene family has been linked to the evolution of the gnathostome (jawed vertebrate) skull. In the 22 August *ScienceExpress*, Depew *et al.* describe the affect of deleting *Dlx5* and *Dlx6* genes on the development of the mouse jaw (*Scienceexpress*, 22 August 2002, DOI:10.1126/science.1075703). They performed extensive *in situ* hybridization analysis of mutant embryos to study the expression of genes involved in branchial arch development. In the absence of *Dlx5/6* they observed a 'homeotic' transformation of the lower jaw into an upper jaw. Depew *et al.* propose that the establishment of a pattern of nested expression of *Dlx* genes in the branchial arches contributed to the transition from jawless to jawed vertebrates.

References

1. Lamprey *Dlx* genes and early vertebrate evolution.
2. *ScienceExpress*, [<http://www.sciencexpress.org>]
3. The *Dlx5* and *Dlx6* homeobox genes are essential for craniofacial, axial, and appendicular skeletal development