



# DMDD

Deciphering the Mechanisms  
of Developmental Disorders

[dmdd.org.uk](http://dmdd.org.uk)



@dmdduk



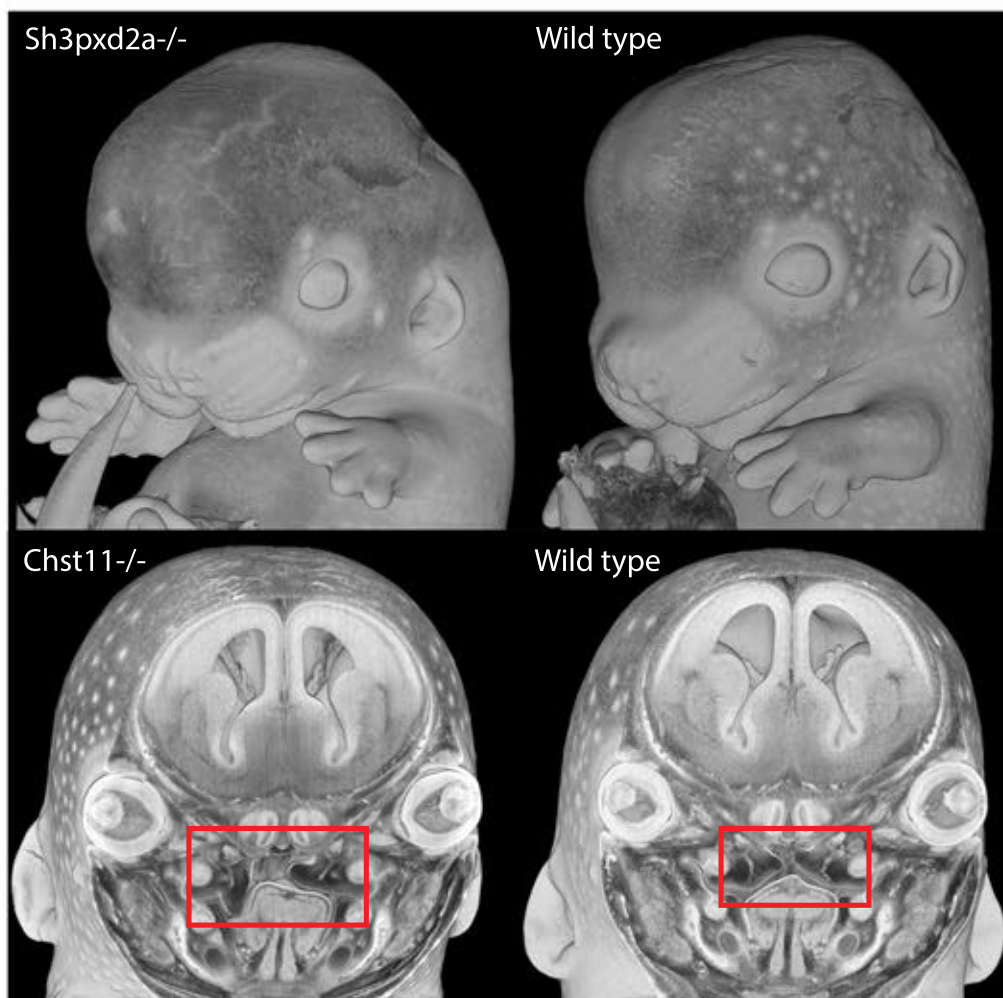
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## Find gene knockouts giving craniofacial abnormalities

The [DMDD database](http://dmdd.org.uk) is designed to help clinicians and developmental biologists identify gene mutations that may be linked to developmental abnormalities, including many craniofacial phenotypes.

The project studies the morphological effects of targeted gene knockouts in mice. Using 3D analysis of detailed images, hundreds of phenotypes have been identified in developing embryos and all data is freely available online. Currently, 26 gene knockouts in the database have resulted in a craniofacial phenotype, including cleft palate and abnormalities in craniofacial bone, nerve and blood vessel morphology.



An *Sh3pxd2a* knockout embryo (top left) has an abnormally short snout, while the palatal shelves of a *Chst11* knockout embryo (bottom left) are misaligned.

Users can search the data by gene or phenotype to find candidate genes related to craniofacial defects, and identify phenotypes that occur together.

The database is rapidly growing, with a goal to analyse a total of 240 lines by mid-2018.

Visit [dmdd.org.uk](http://dmdd.org.uk) to explore the data.