



# DMDD

Deciphering the Mechanisms  
of Developmental Disorders

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



@dmdduk



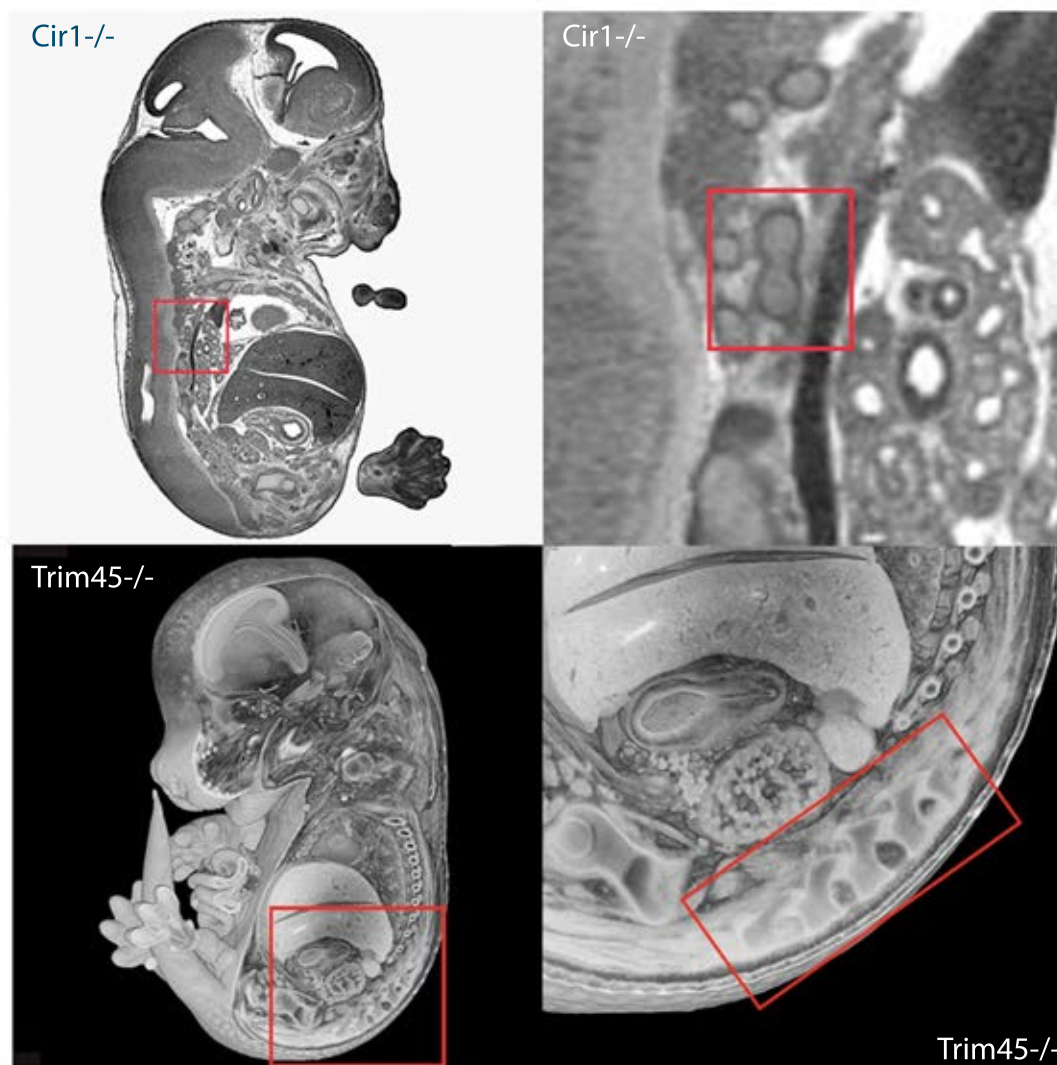
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## Find gene knockouts giving abnormal bone development

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 skeletal 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 available online. Currently, 40 gene knockouts in the database have resulted in skeletal phenotypes, including fused ribs, scoliosis and lordosis.



A *Cir1* knockout embryo (top row) has fused ribs, while a *Trim45* knockout embryo (bottom row) has fused vertebral arches.

Users can search the data by gene or phenotype to find candidate genes related to bone 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.