



# DMDD

Deciphering the Mechanisms  
of Developmental Disorders

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



@dmdduk



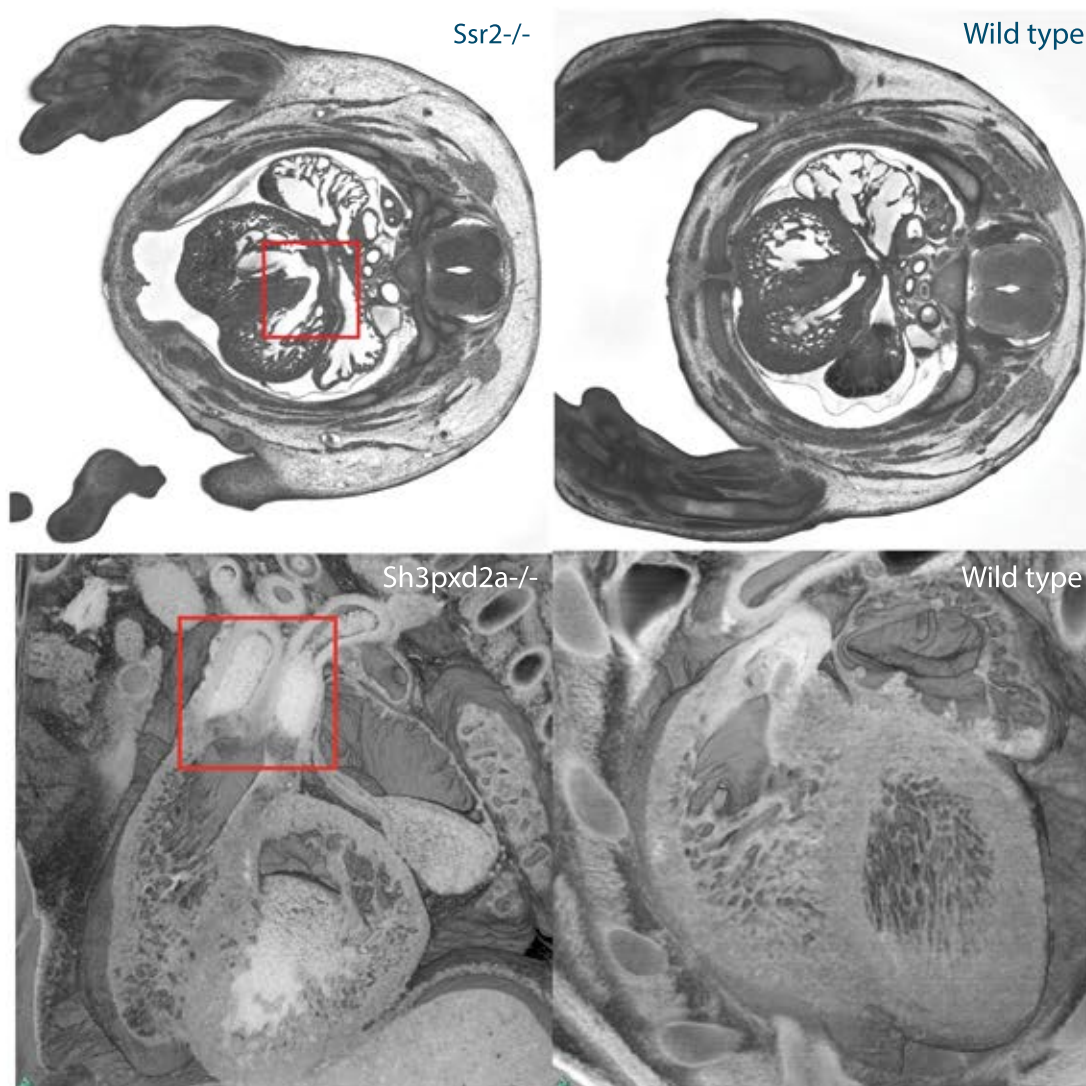
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## Find gene knockouts giving abnormal heart development

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 cardiovascular 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. Around three quarters of the gene knockouts studied have resulted in cardiovascular defects, including AVSD, bicuspid aortic valve and a range of septal defects.



An *Ssr2* knockout embryo (top left) has a ventricular septal defect, while an *Sh3pxd2a* knockout embryo (bottom left) has double outlet right ventricle.

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