PhenoImageShare

www.phenoimageshare.org

Provide annotation & embeddable viewing tools

Toolkit for indexing & querying

PhenoImageShare will provide the tools that allow the sharing, annotation and integration of phenotype images in the context of bioinformatics resources. Exposing phenotype annotations & image links via community resources, e.g. Ensembl

Use pre-existing domain ontologies, e.g. EMAP and MP

Index spatial, regional & whole image annotation

## Pilot study will use images from DMDD and IMPC
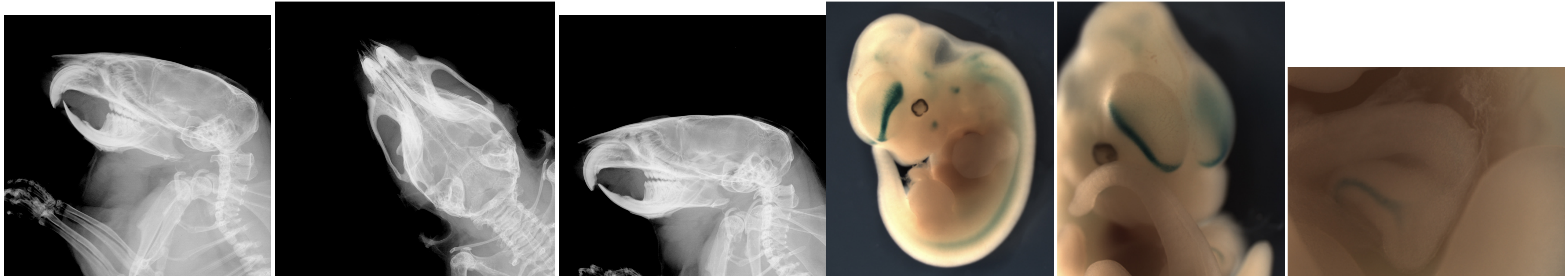
Images: WTSI (IMPC portal) (Courtesy Jacqui White, Wellcome Trust Sanger Institute)

Images: Tracer database (Courtesy Francois Spitz, EMBL Heidelberg)

X-ray - skeletal abnormalities using a high resolution 2D image

E11.1 positive LacZ expression of br. arches, digestive, forebrain, midbrain, neural tube Chromosome 4 - at position 77724308 1

PhenoImageShare leverages existing technology
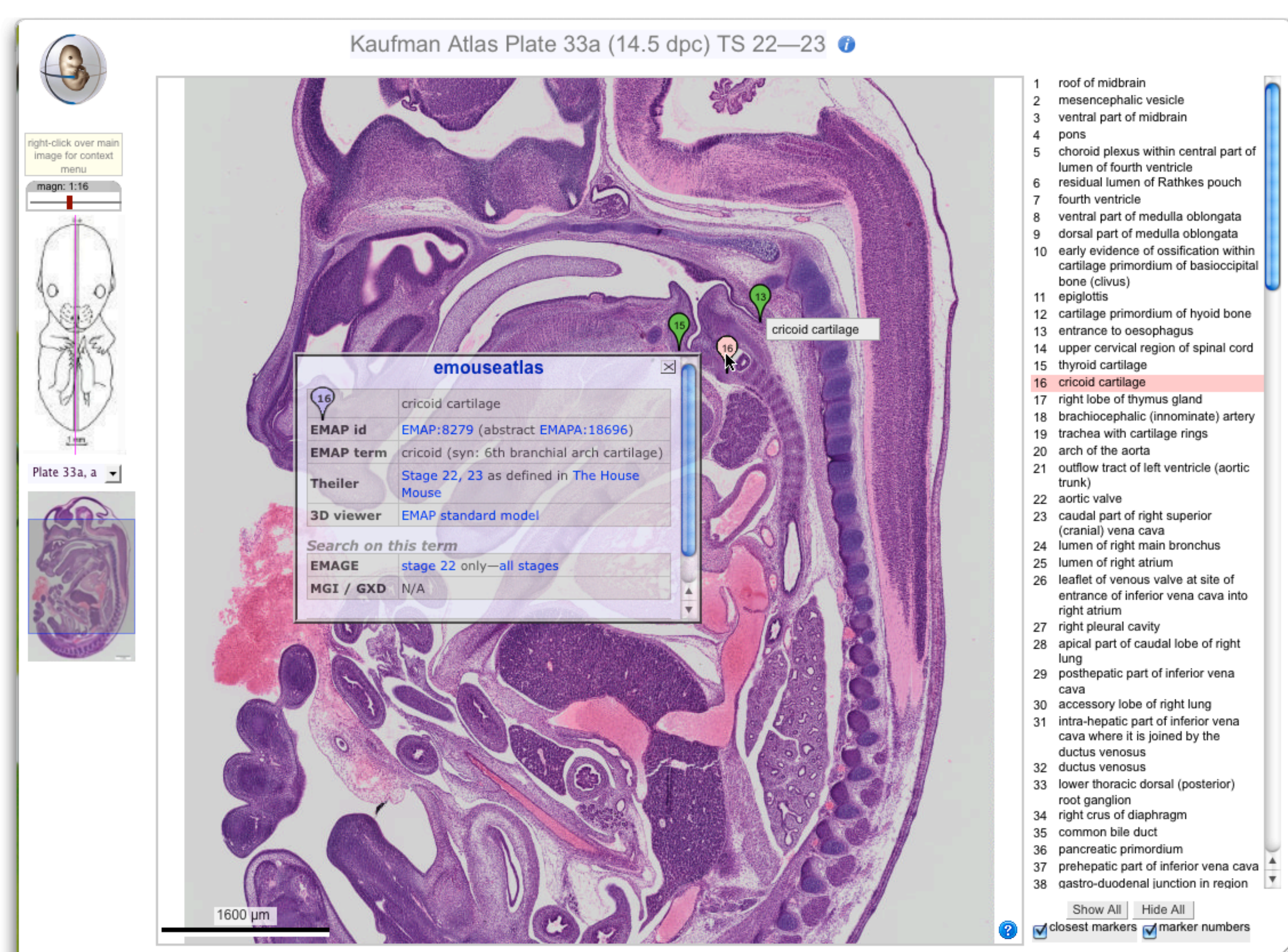
Screen capture of the new "Atlas of Mouse Development" (M Kaufman, Academic Press, 1992) online image viewer. The tiled viewer allows spatial annotation to full resolution of the images in this case presented as markers.

High-resolution view through a HREM image of a mouse embryo at stage E4.5. The 3D image is captured using the HREM block-face imaging system developed at the MRC National Institute for Medical Research (NIMR) by Dr Tim Mohun (doi: 10.1100/tsw.2009.154). This system will be used for embryo phenotype analysis within the DMDD phenotyping consortium. The view is generated at an arbitrary section through the volume.

Both image viewers are based on the the IIP3D technology developed at the MRC Human Genetics Unit (doi:10.1186/1471-2105-13-122). PhenoImageShare will use the underlying IIP3D technology to deliver image content for phenotype annotation and query for high-resolution histo-pathology type data.

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