

# How to Use the Anatomy Tree

- The atlas website additionally hosts an interactive anatomy browser that allows a user to access staged anatomy in an ontology tree.
- This Anatomy Tree is accessible by clicking on the **Anatomy** link on the Stage Selector Page.

The screenshot shows the eMouseAtlas Stage Selector Page. At the top, there is a navigation bar with links for 'EMAP Project', 'EMA Anatomy Atlas', 'EMAGE Gene Expression', 'About', and 'Help'. On the right side of the header are 'Site Search' and 'Feedback' buttons, along with a 'Browser compatibility' link. Below the header is a 'Stage Selection' section. It features a grid of 24 small images representing mouse embryos at various stages (ts12 to ts22). A scroll bar indicates the images extend beyond the visible area. Above the grid are dropdown menus for 'stage' (set to ts17) and 'age' (set to E10.5). To the left of the grid is a 'stage range' slider from 0 to 56. Below the stage selection is a 'Model Selection' section. It displays a 3D reconstruction of a mouse embryo labeled 'EMA:49'. Below this are three smaller thumbnail images of other embryos. To the right of the 3D model is a 'Available Data' sidebar containing links to 'High Resolution Sections', '3D Reconstruction', 'Movies', 'Litter Variation', 'Special Systems' (with links to 'Anatomy', 'Theiler Stage', 'eHistology', 'Interactive Anatomy Browser', and 'Download'), and a 'compare models' checkbox. At the bottom of the page is a footer with copyright information: 'EMAP • Human Genetics Unit • Medical Research Council Tel: +44(0)131 332 2471 • emapp@emouseatlas.org' and '© All site content, except where otherwise noted, is licensed under a Creative Commons Attribution License. EMAP v2.2.0'. On the far right is the MRC logo.

**The eMouseAtlas Stage Selector Page**

## Using the Anatomy Tree to illustrate Partonomic Ontology Relationships

The screenshot shows the Emap interface with the title 'Emap' and a logo of a kidney. The menu bar includes 'EMAP Project', 'EMA Anatomy Atlas', 'EMAGE Gene Expression', 'About', and 'Help'. Top right features 'Site Search', 'Feedback', and 'Browser compatibility'. Below the menu, status bars show 'Anatomy Ontology Stage: TS17 (E10-E11.25)', 'Ema Model: 3', 'Kaufman Histology Image: 0', and 'EMAGE Expression: 3813'. A search bar contains 'heart' with 'Open All' and 'Close All' buttons. The main content is a hierarchical tree under 'TS17 Anatomy (v13.0) Ontology terms 958 (search found: 6 terms)'. The tree starts with 'mouse (EMAPA:25765, TS01-TS28)' and branches into 'body region (EMAPA:36031, TS11-TS28)', 'cardiovascular system (EMAPA:16104, TS11-TS28)', 'blood (EMAPA:16332, TS13-TS28)', and 'cardiovascular system mesenchyme (EMAPA:35973, TS12-TS26)'. The 'heart (EMAPA:16105, TS11-TS28)' node is expanded, showing its sub-components: atrioventricular canal, bulboventricular groove, bulbus cordis, cardiac jelly, cardiac muscle tissue, common atrial chamber, endocardial cushion tissue, endocardial lining, endocardial tube, heart atrium (highlighted in red), heart mesenchyme, heart mesentery, heart septum, outflow tract, primitive ventricle, sinus venosus, vascular system, arterial system, blood vessel, heart great vessel (highlighted in red), vascular element, and venous system.

**The Anatomy Tree**

- The EMAPA ontology uses a controlled vocabulary and *part-of* relationships to describe anatomical components, with stage-specific partonomic (part-of) hierarchies provided from TS01-TS26.
- The interactive ontology tree illustrates the partonomic relationships between the anatomical terms as a hierarchy where each term may have a number of sub-components.
- You can **find components** in the anatomy tree by typing them in the search box and clicking on return.