

**Figure 2a:** Relationships between genes and data types across multiple MOD-InterMine databases. Vertical lines represent relationships between genes, phenotypes and expression location within a single database. Horizontal lines represent bridging relationships between different databases, in this case orthology between genes. Note that the number of data type layers is not zestricted to the three shown, and that horizontal bridges are possible between data types other than genes. For instance, Uberon and PATO allow bridging between expression location and phenotype respectively.

**Figure 2b:** Representation of a bridging search that finds, for genes that are differentially expressed under drug treatment in mouse, orthologs that are expressed in tissues that can easily be sampled in humans. In this way evidence from a mouse cancer model can be used to identify candidate biomarkers for use in pharmacodynamic studies within clincial trials.