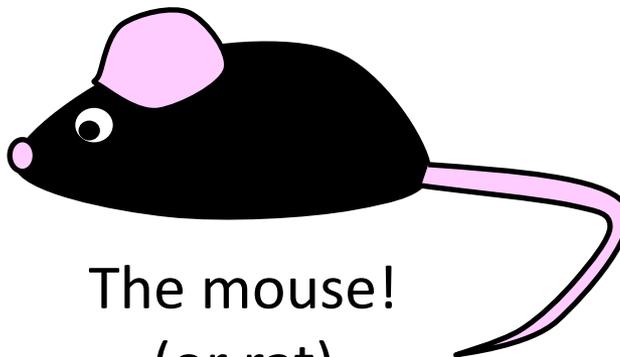
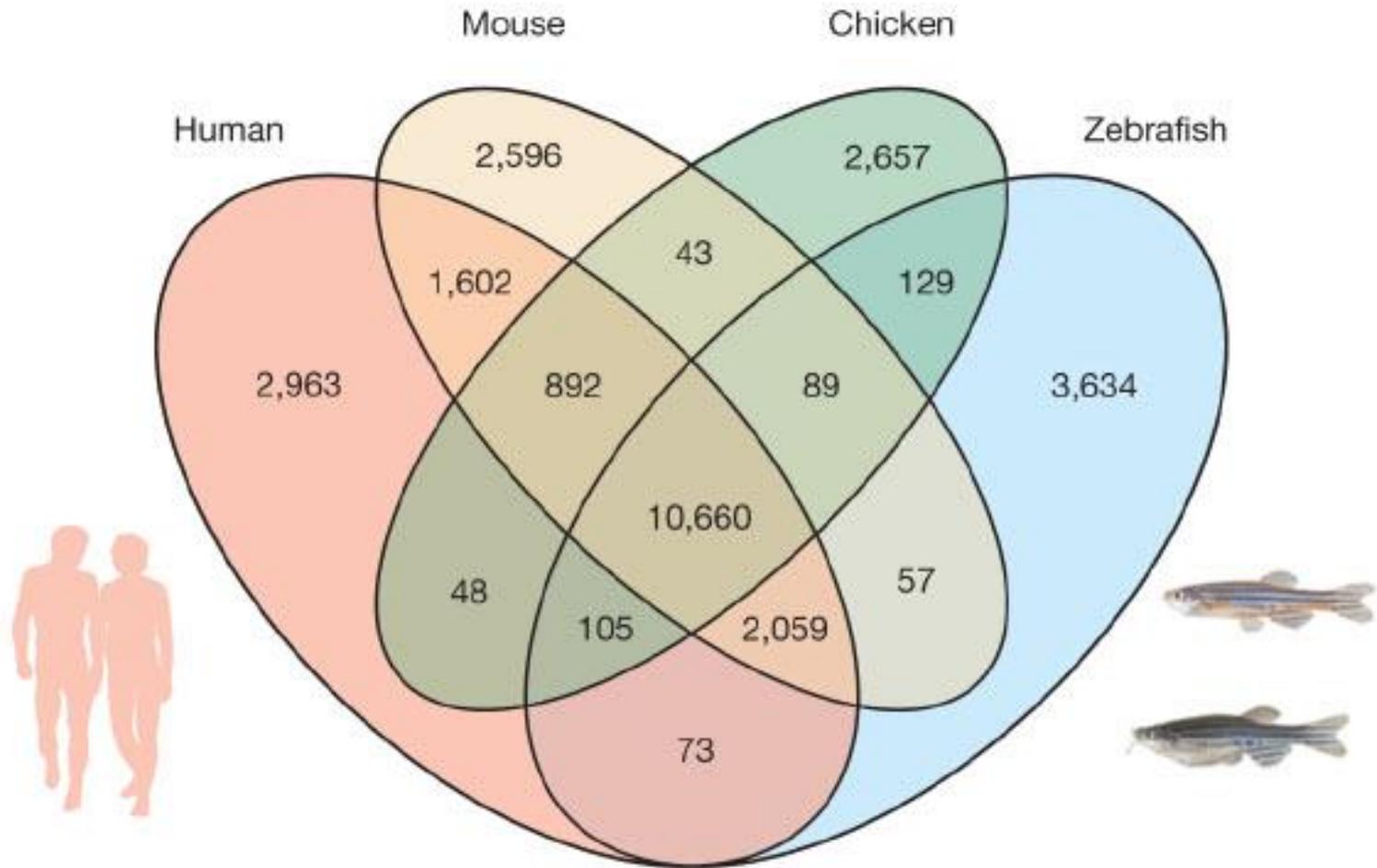


Alternative models in toxicology research



The mouse!
(or rat)

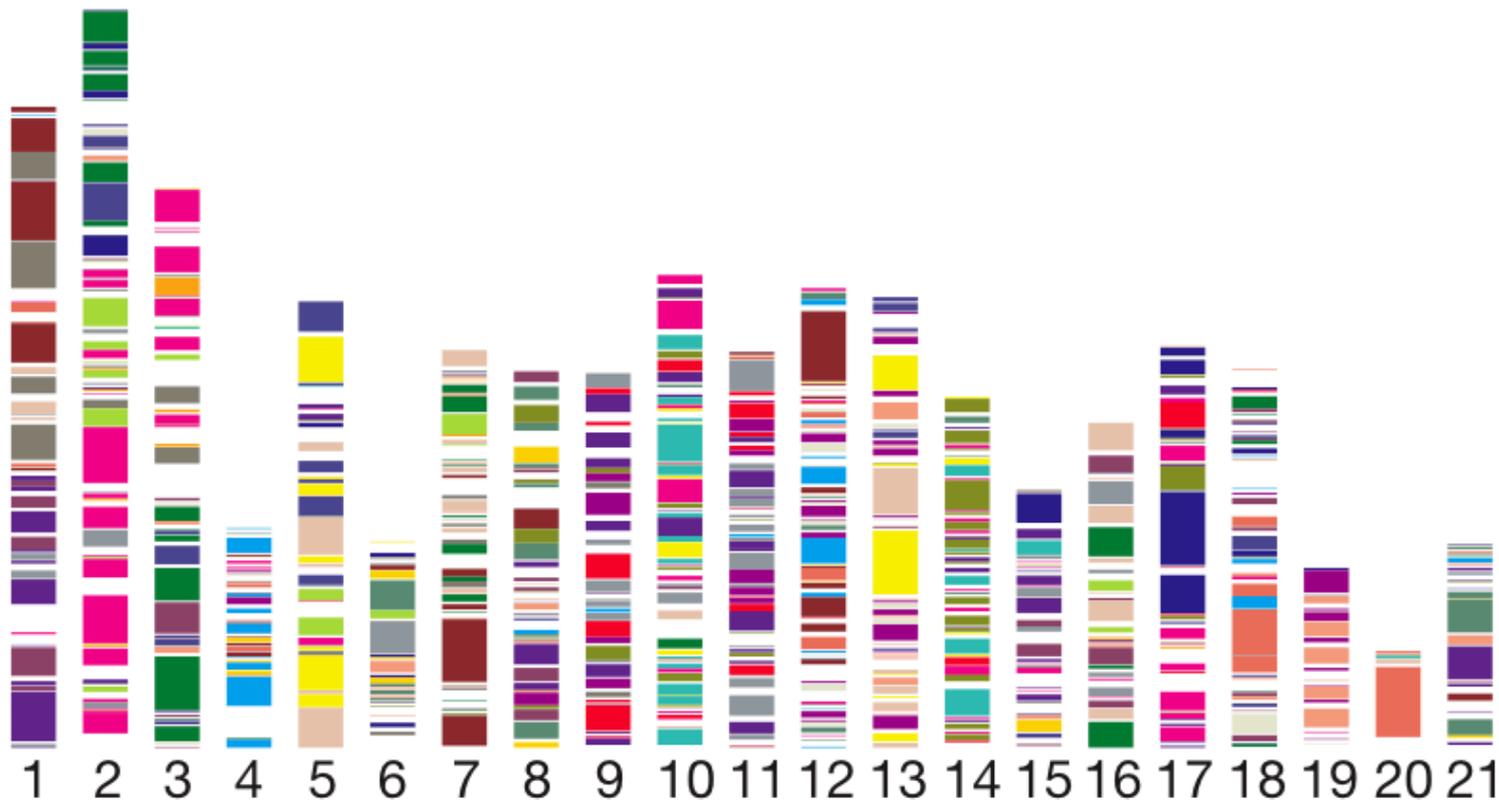
Genes are conserved across different species



Even chromosome segments are conserved

a

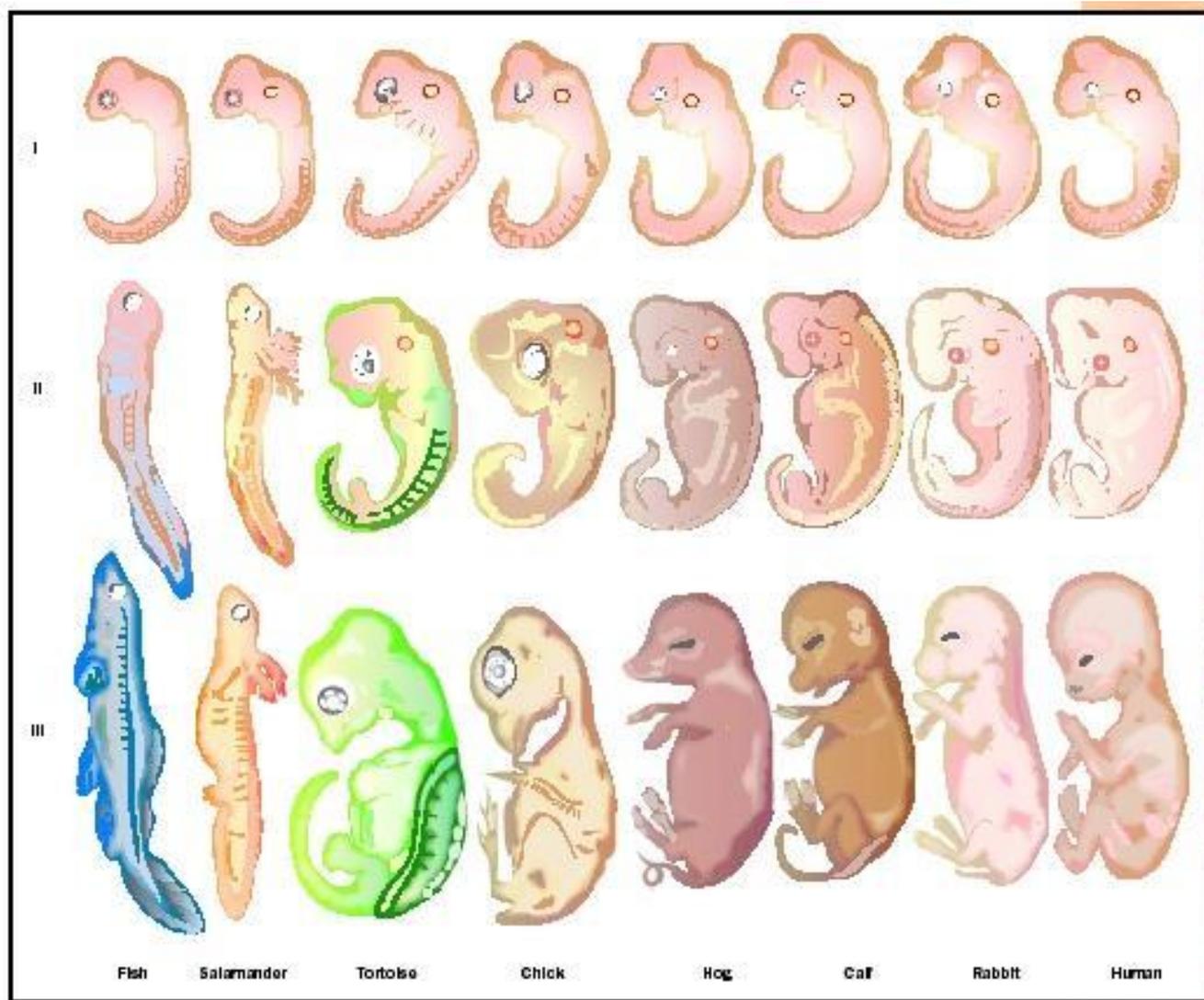
Tetraodon chromosomes



Human



Early development is similar across vertebrates



Model systems allow you to do things you could never do in humans (or even rodents)

- Look at development while it's happening, and visualize how it can be perturbed
- Genetic manipulation is easy – feed a worm, turn off a gene!
- Multiple generation studies now take months, not years