

INC Summer Neuroimaging Bootcamp 2022  
**Comparative Neuroanatomy Primer**

Tim Kosciak, PhD

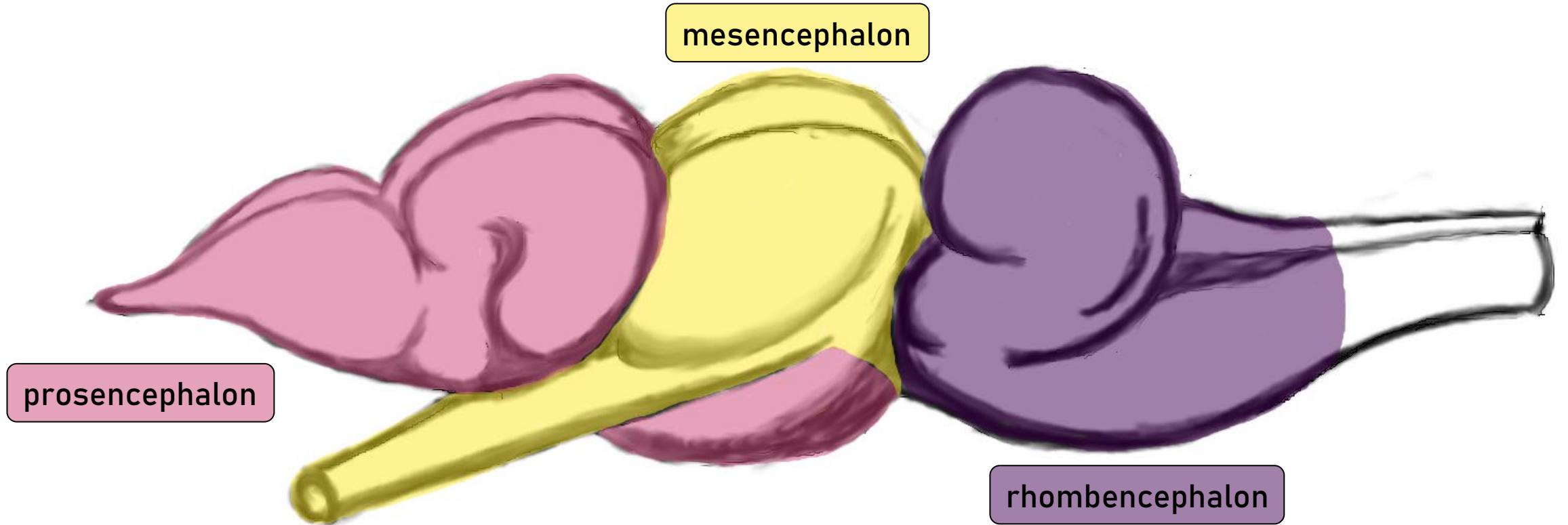
May 24, 2022



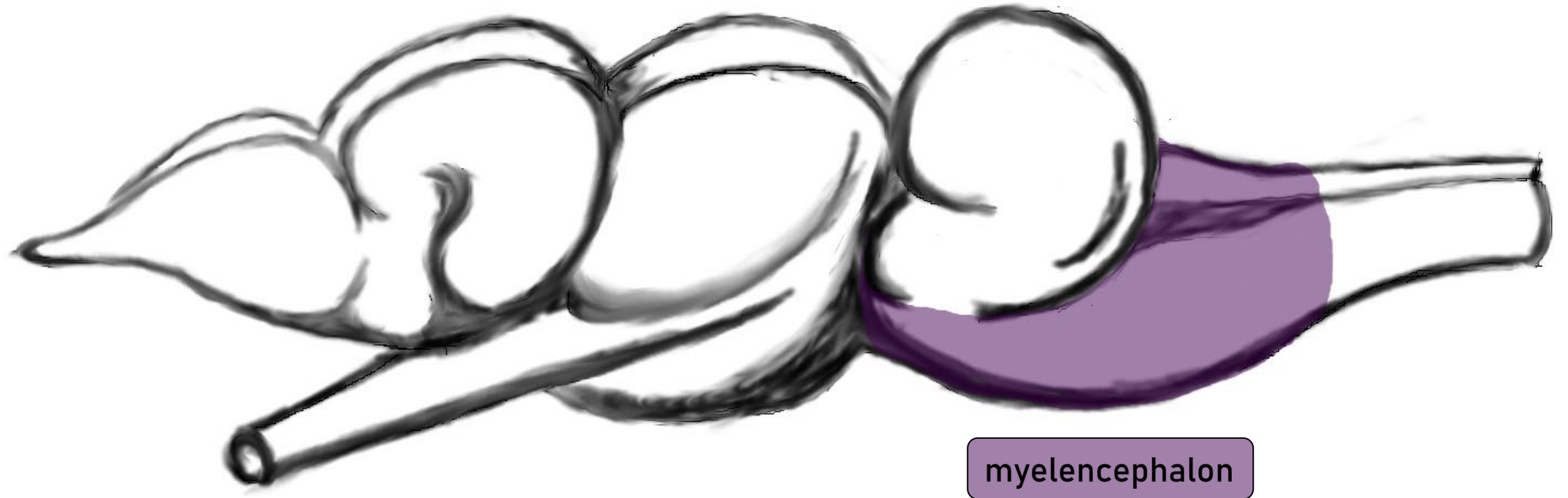
# Basic Vertebrate Brain



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metencephalon

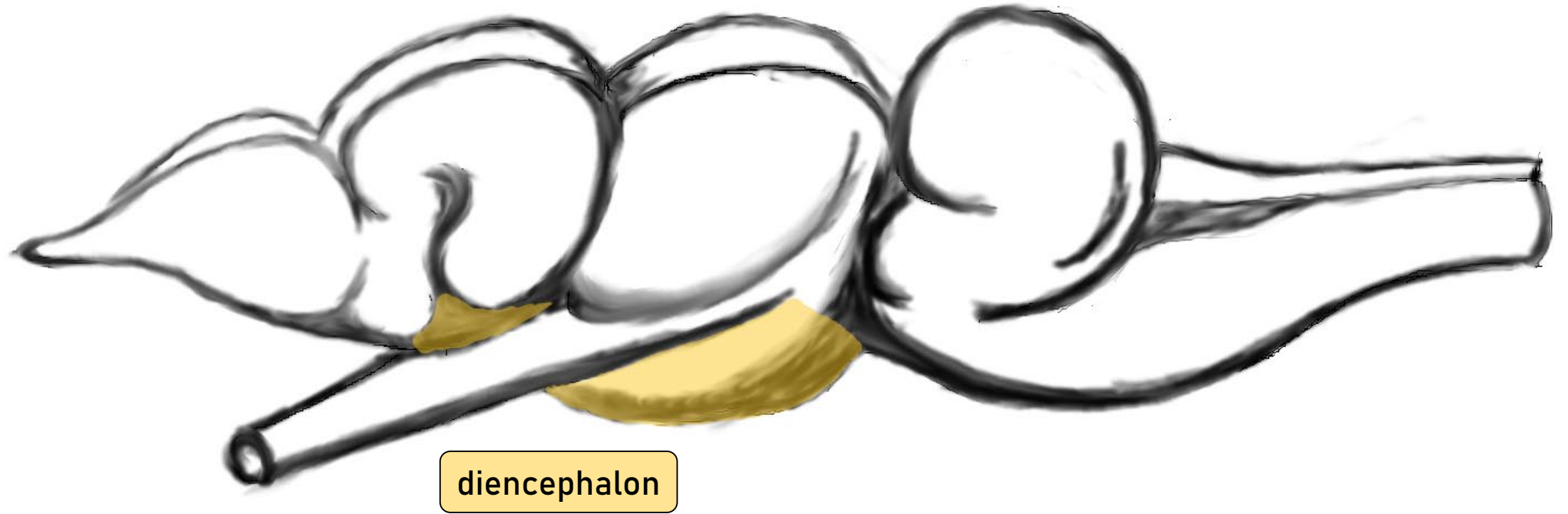


# Basic Vertebrate Brain

mesencephalon

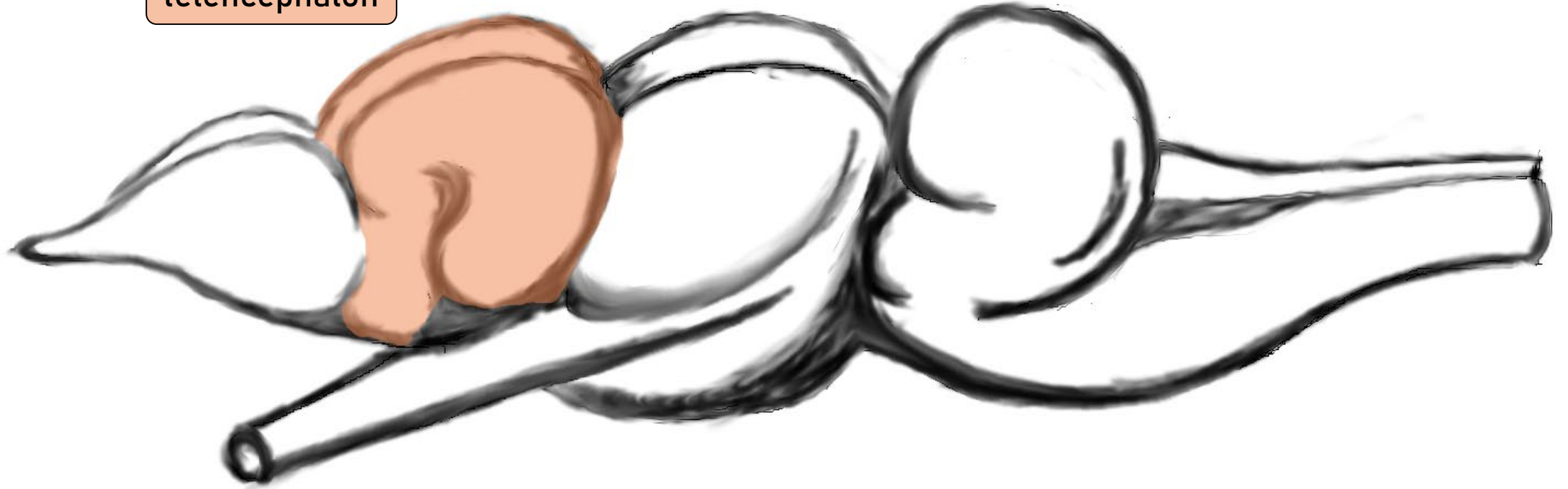


# Basic Vertebrate Brain



# Basic Vertebrate Brain

telencephalon



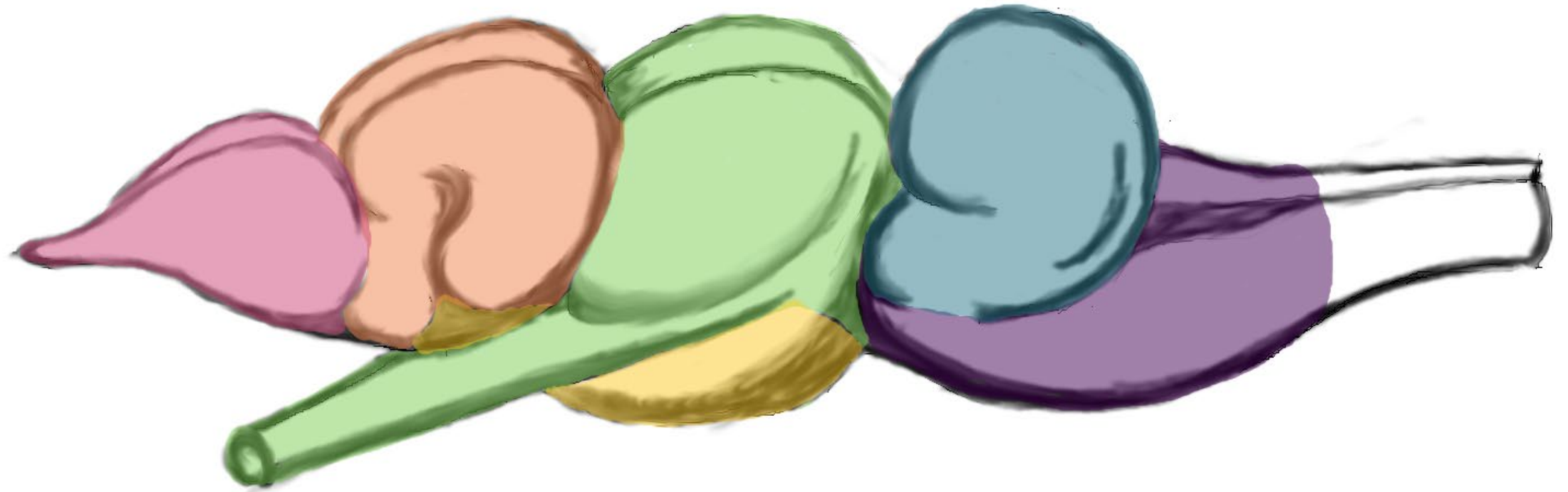


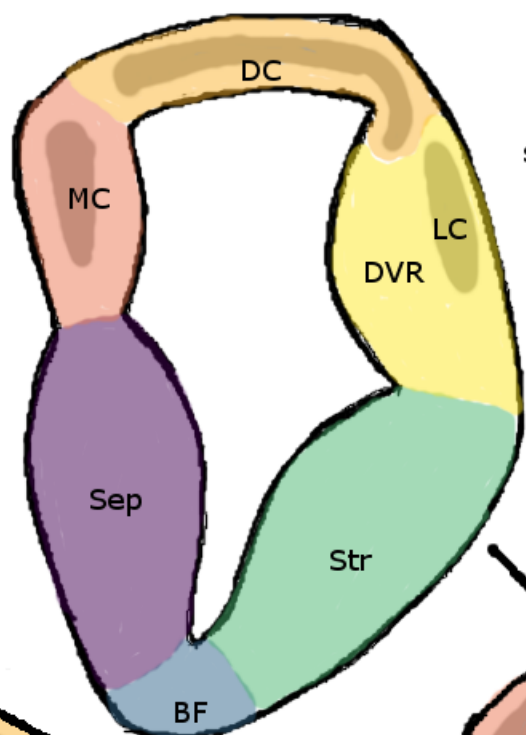
# Basic Vertebrate Brain

olfactory bulb

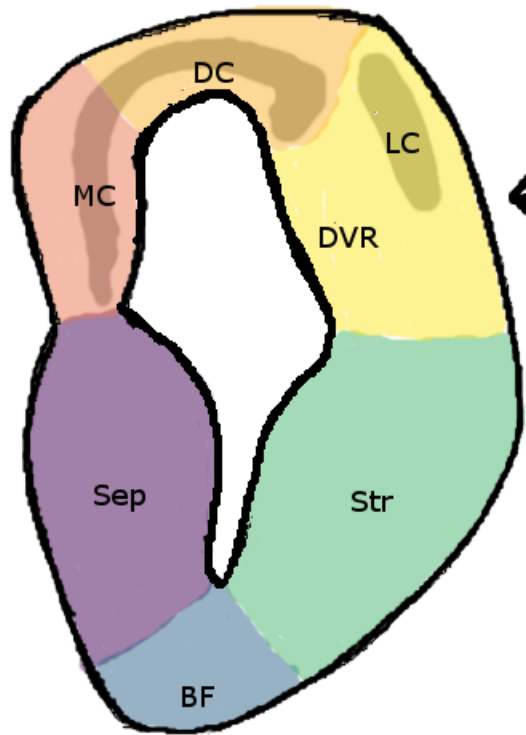


# Basic Vertebrate Brain

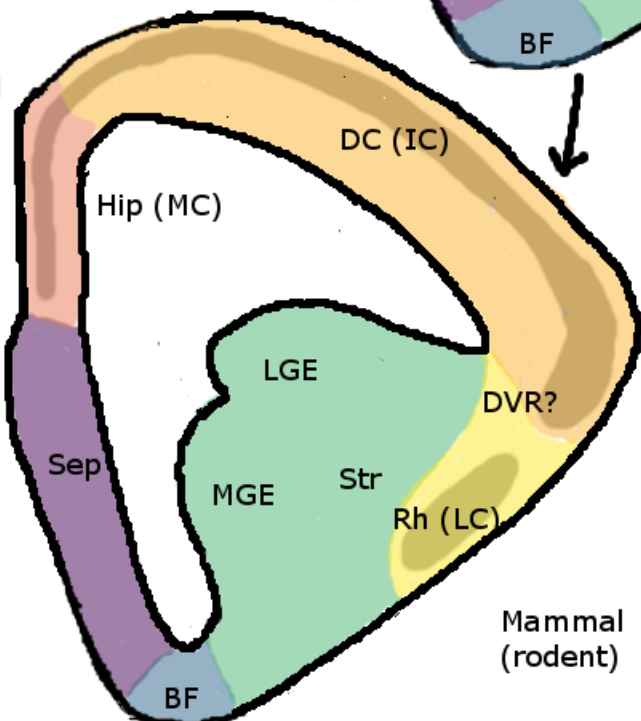




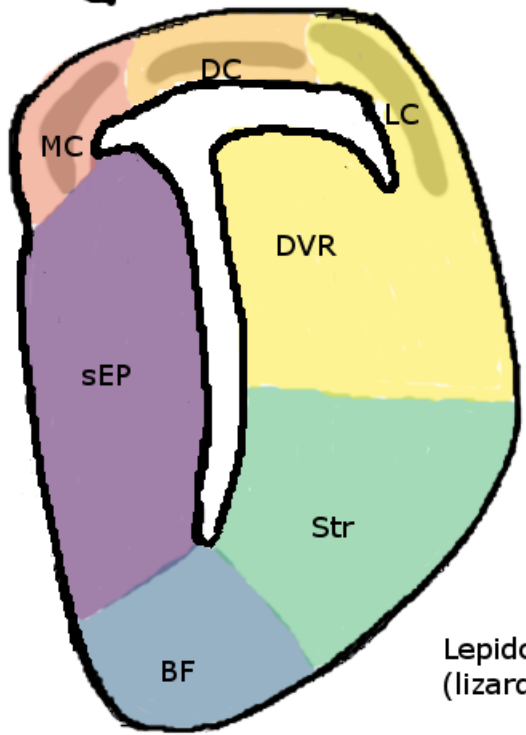
stem amniote



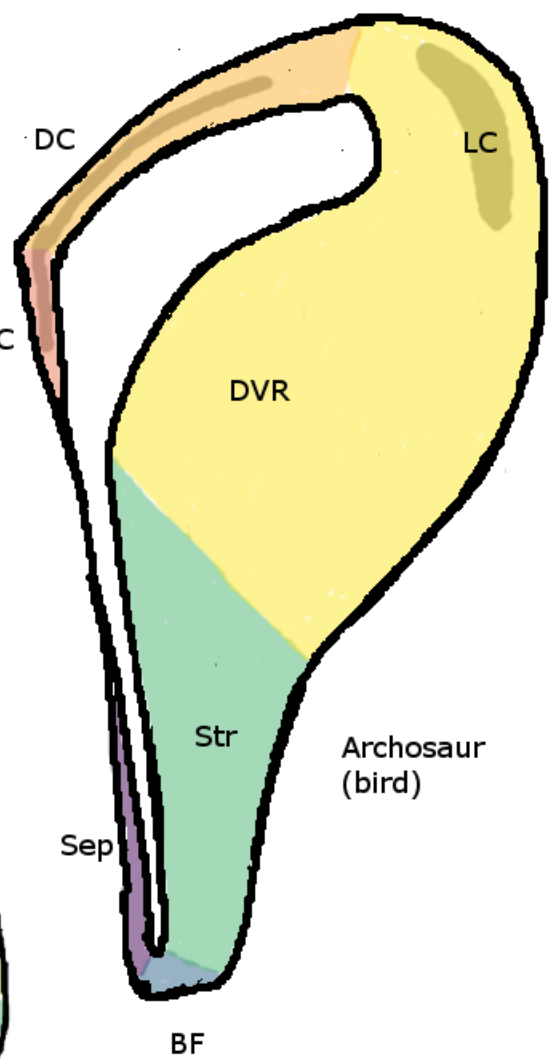
Chelonian (turtle)



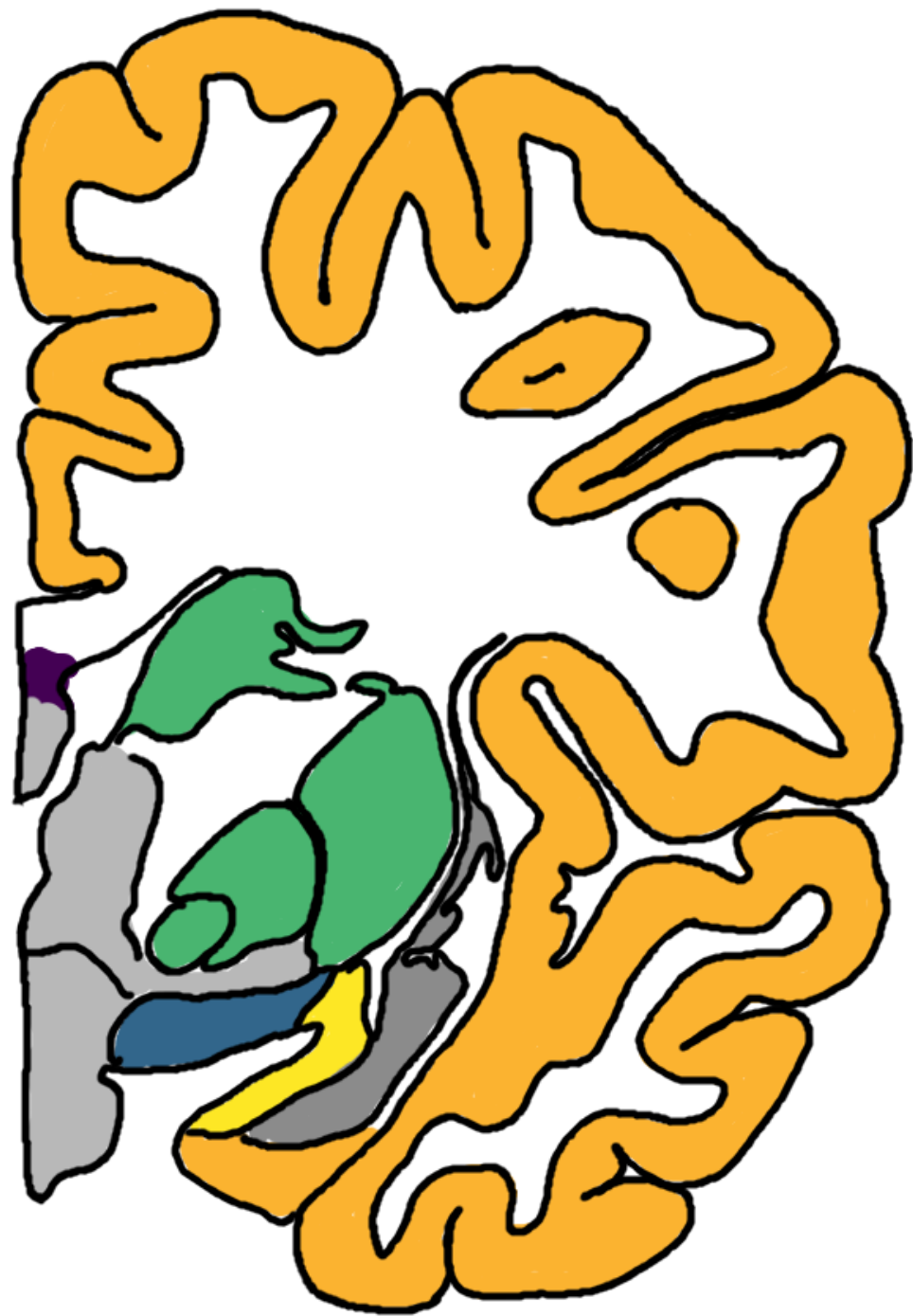
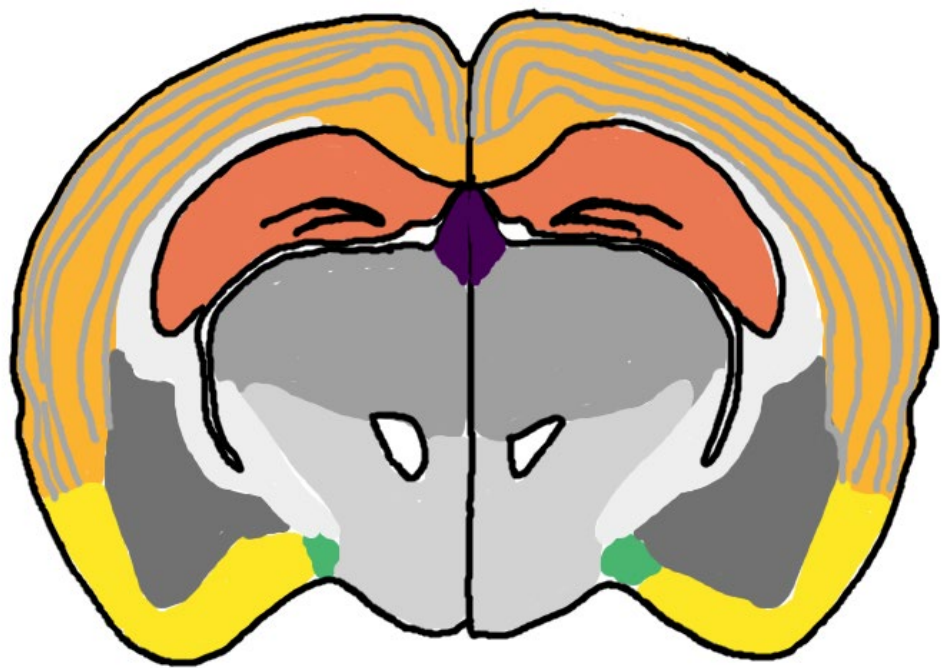
Mammal (rodent)

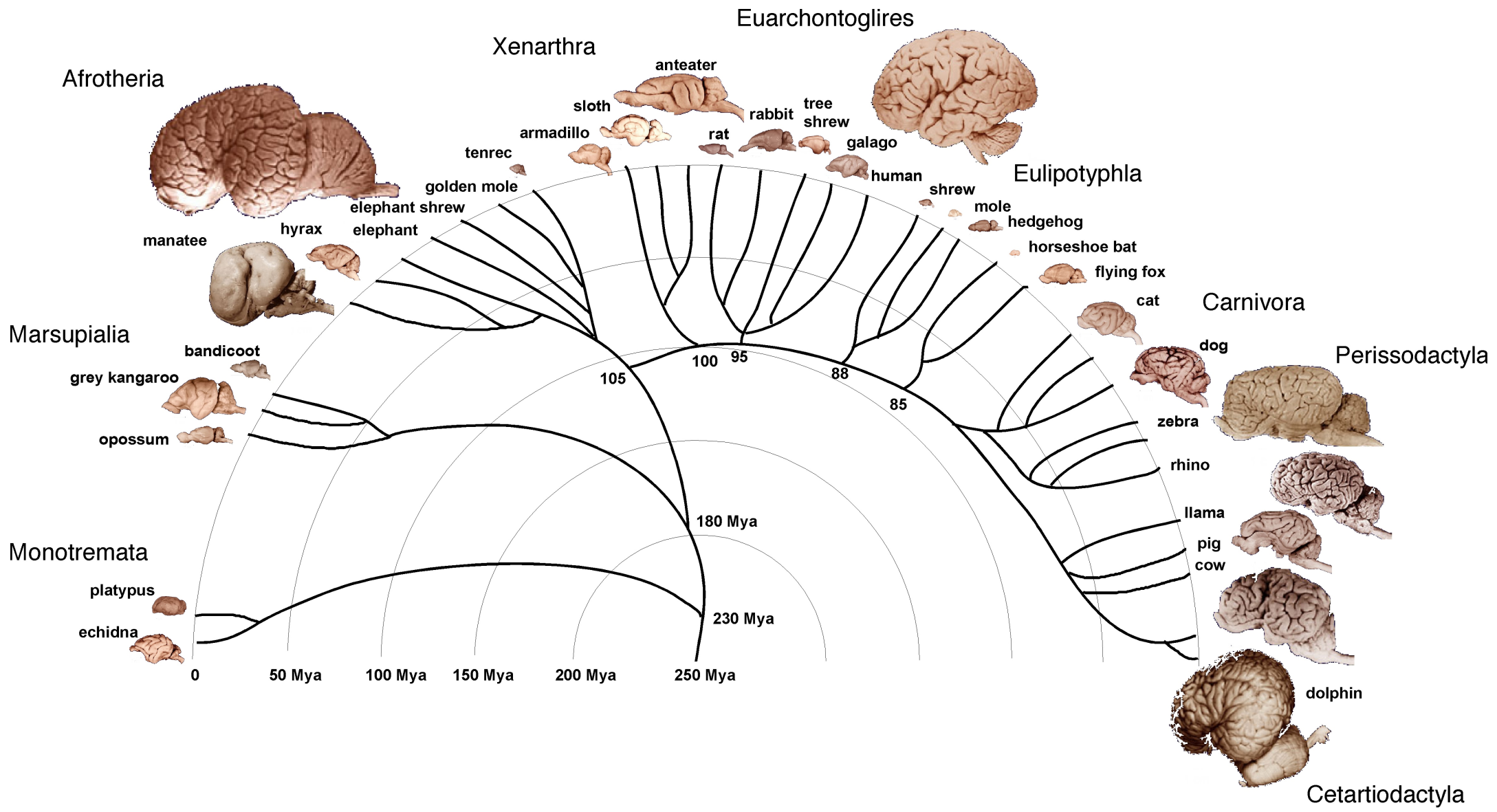


Lepidosaur (lizard)

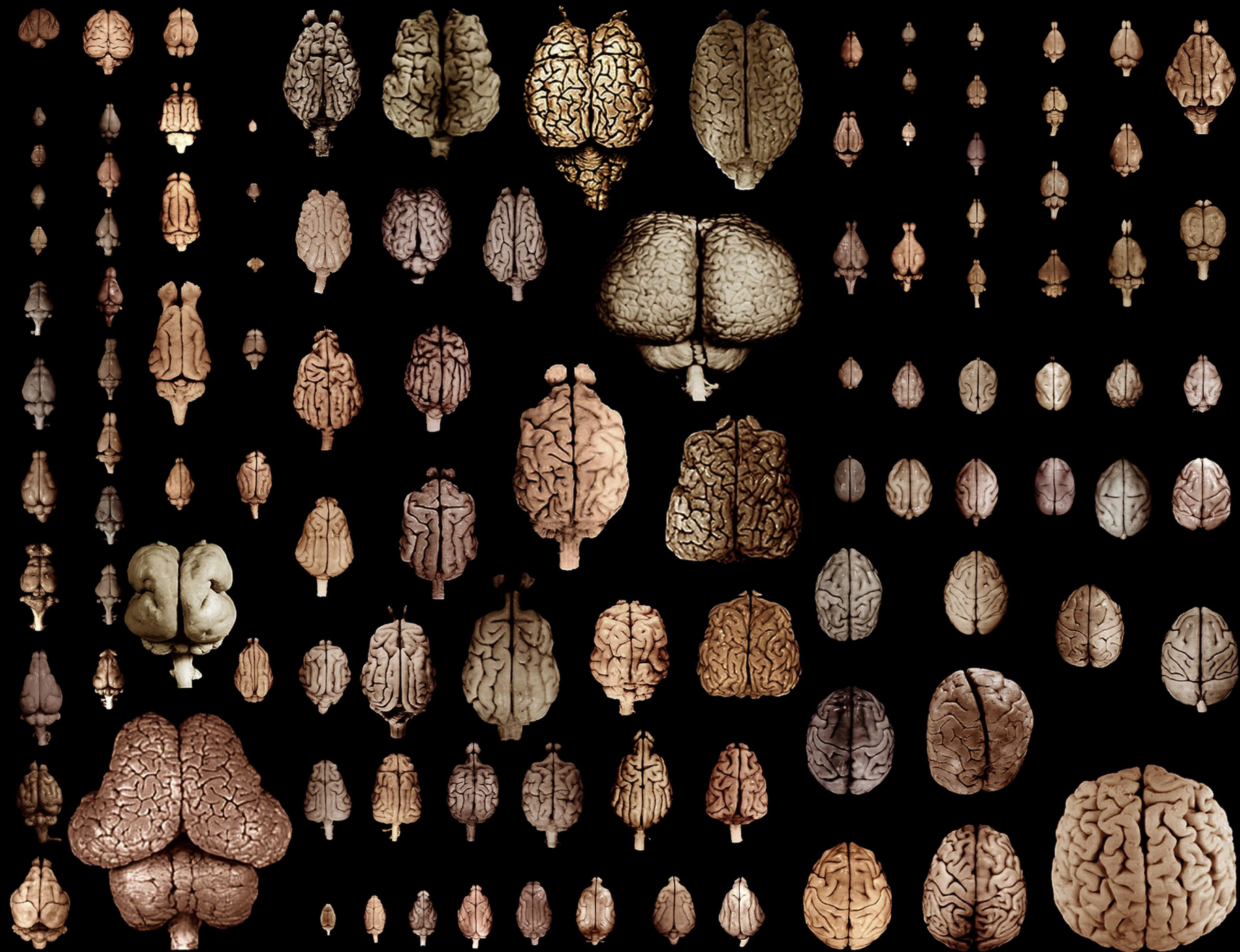


Archosaur (bird)

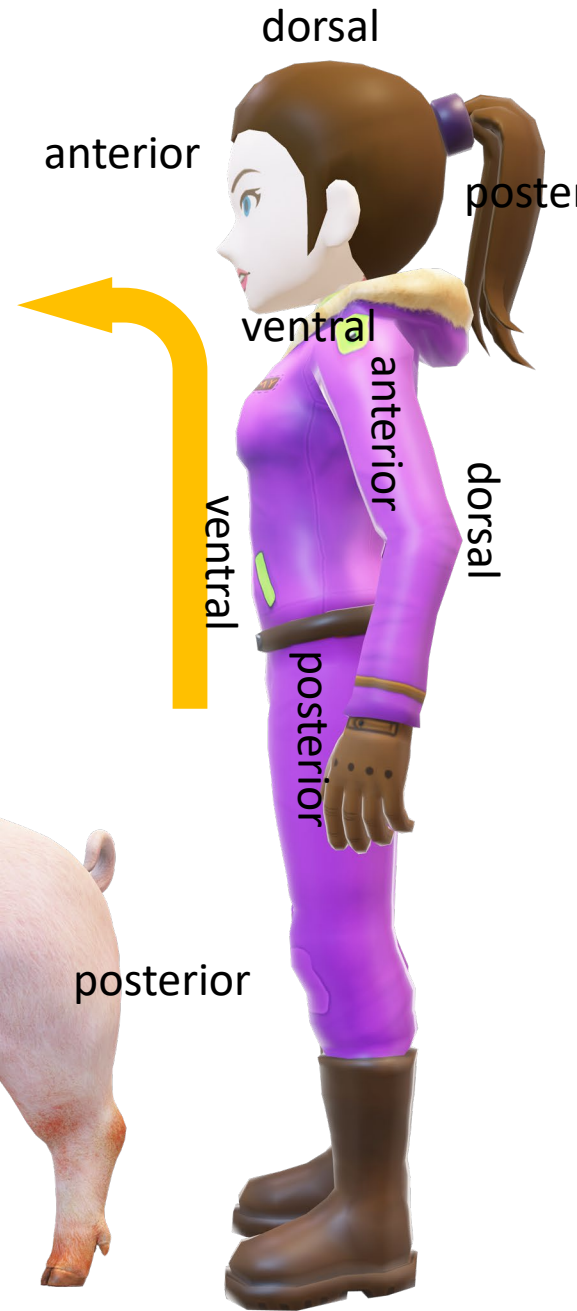
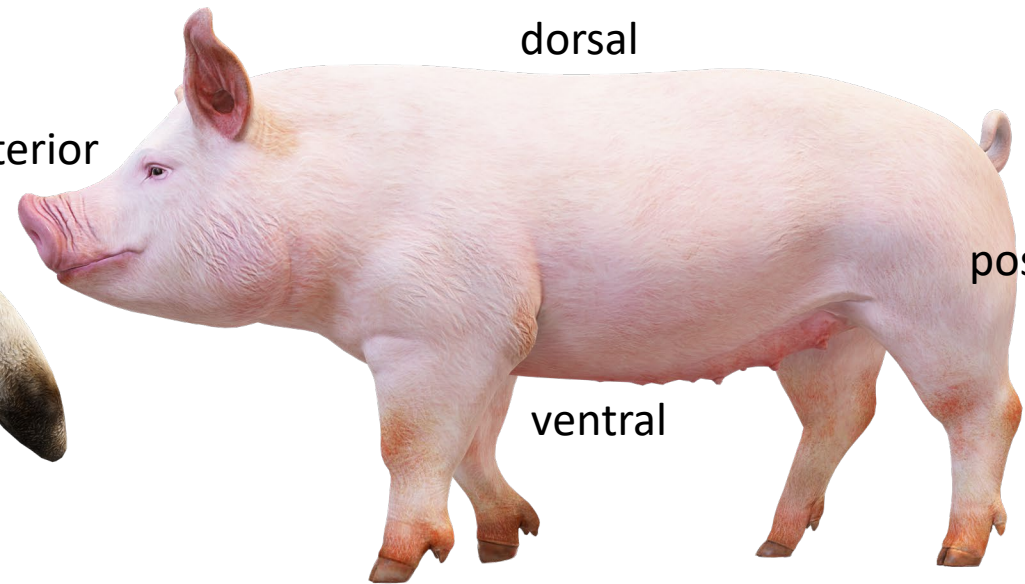
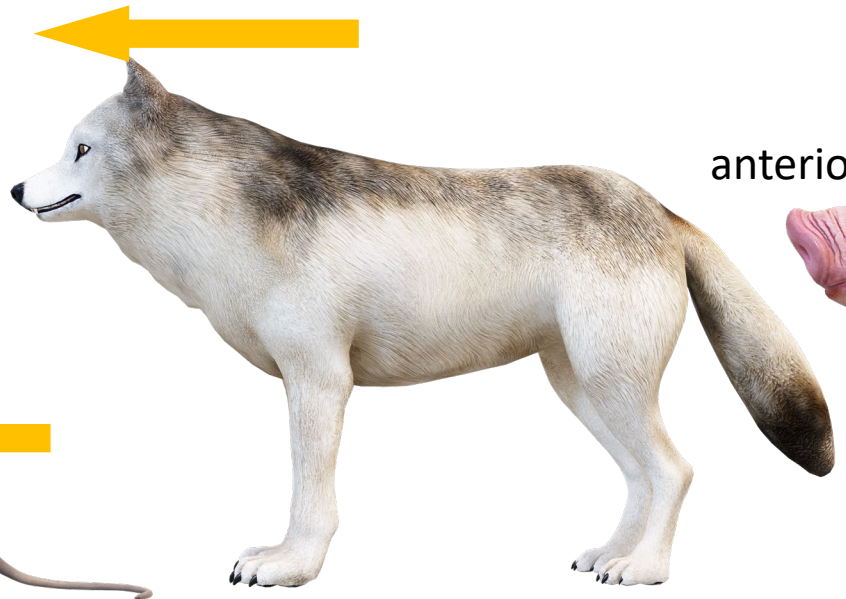


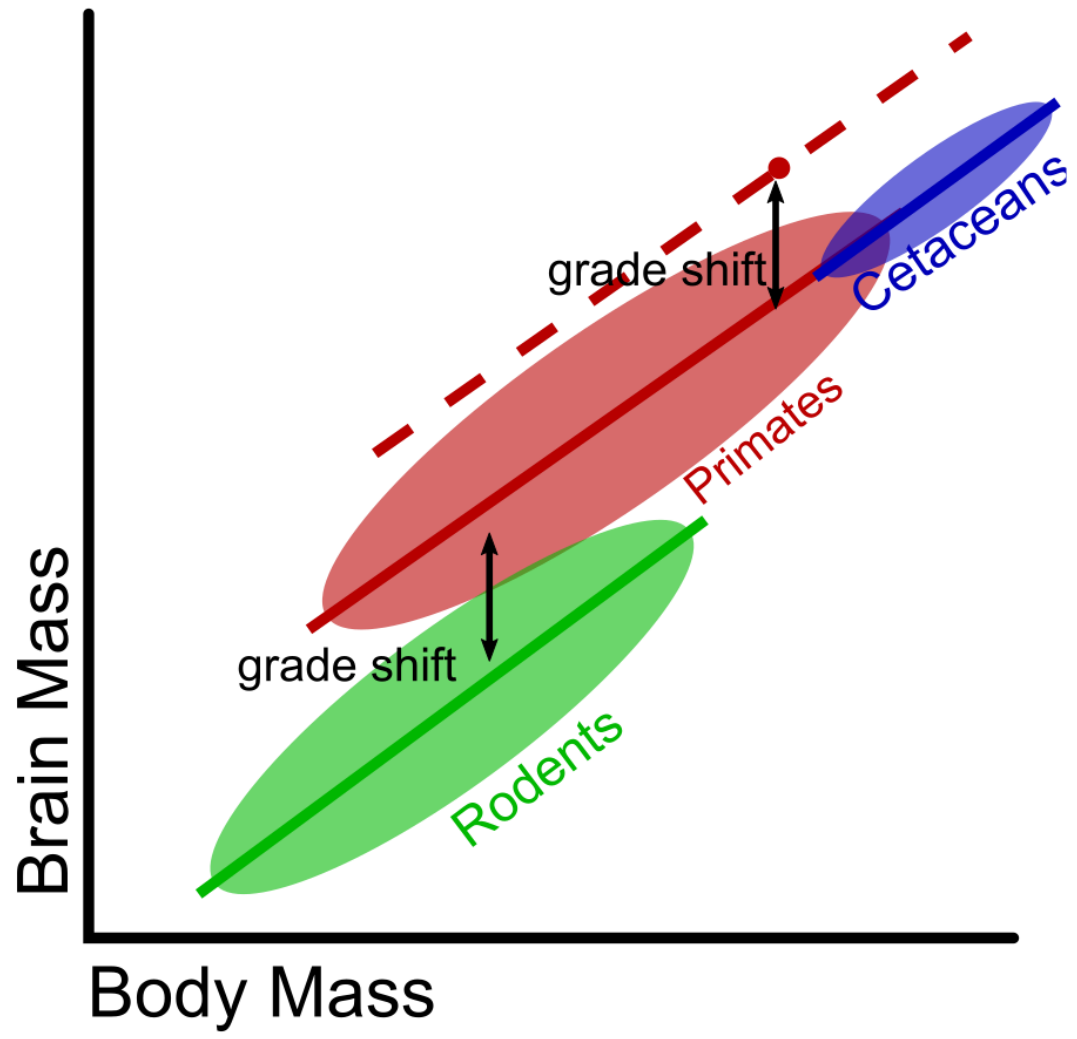






# people are bent





People have big brains, with loads of small neurons  
 e.g., elephant cerebral cortex is 2x larger than humans but has 1/3 as many neurons  
 -the elephant cerebellum has ~250 billion neurons to human ~50 billion

