



# Megan Meany

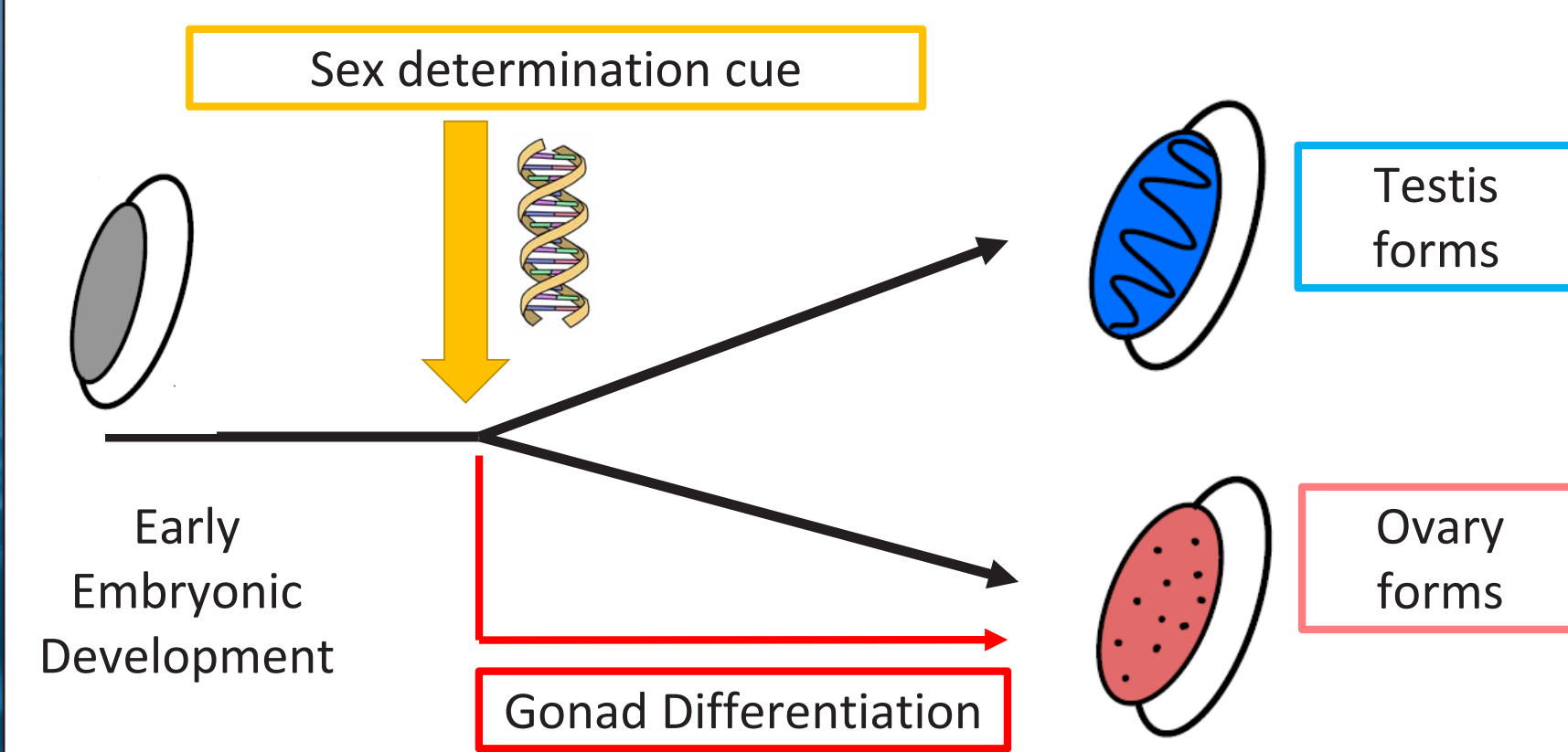
Ph.D. Candidate, Genetics  
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## Sex determination and gonad differentiation in *Anolis sagrei*

### What is Genetic Sex Determination?



### Sex determination in reptiles

- >10,000 reptile species
- No primary SD genes identified

### A. Sagrei as a model for SD

- Good reference genome
- Gene editing

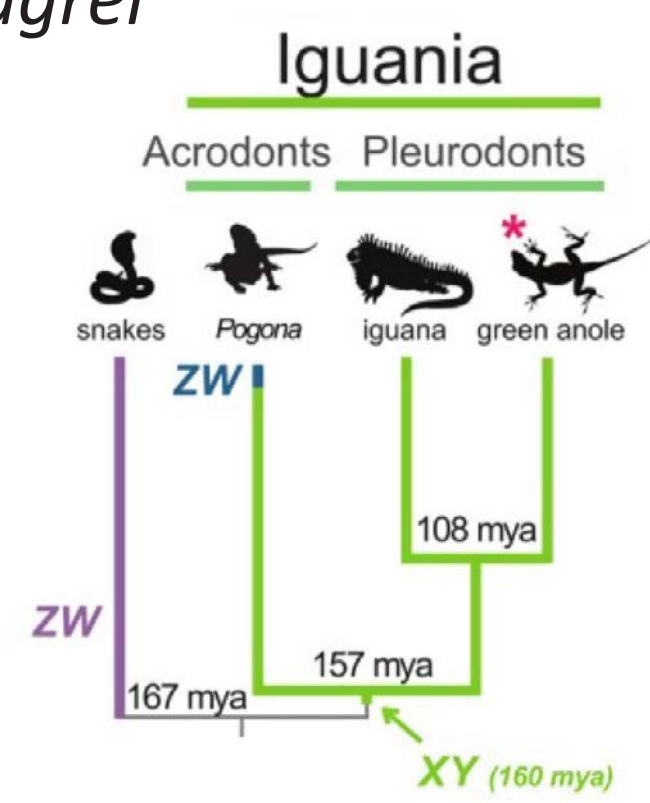


### Sex Chromosomes of *Anolis sagrei*

- Ancient conserved XY system
- Hypothesize primary SD gene present on Y

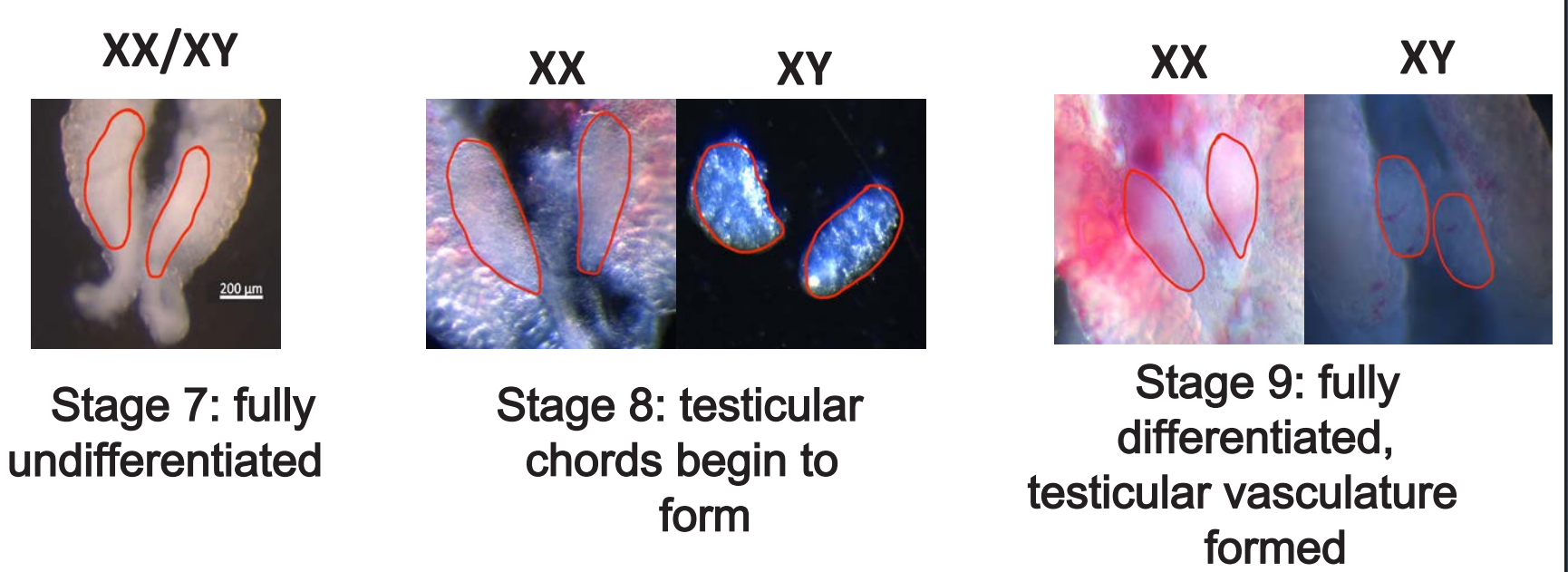


Giovannotti et al. 2017: Figure 1 C

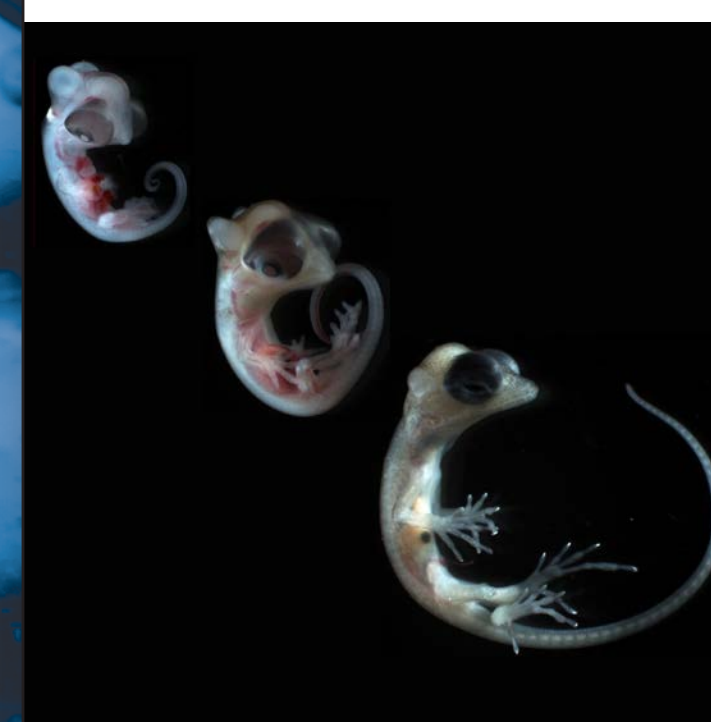
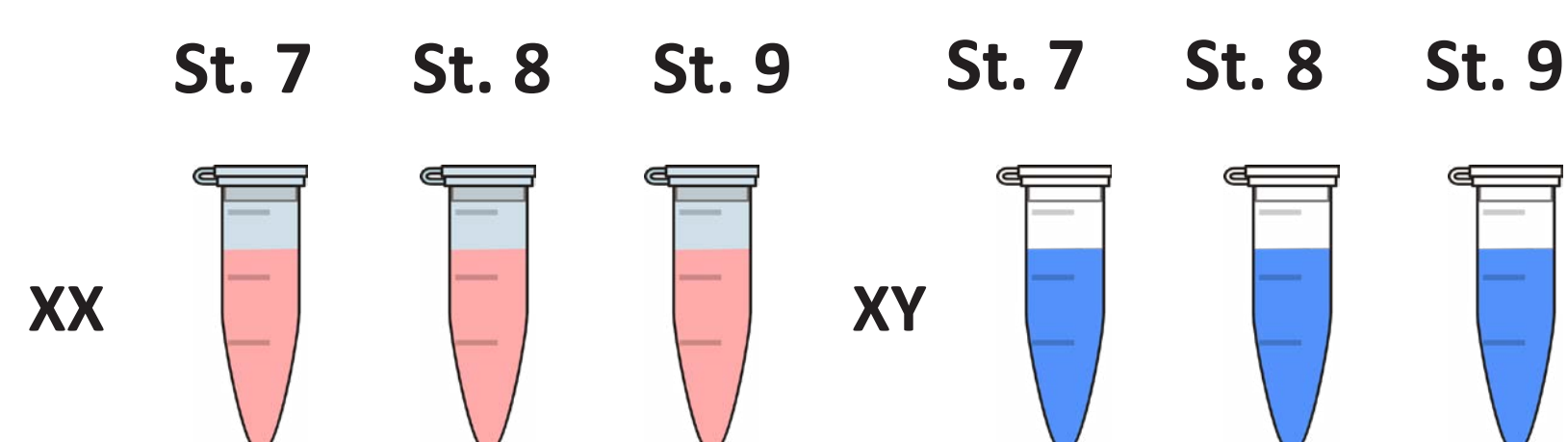


Adapted from Marin et al. 2017

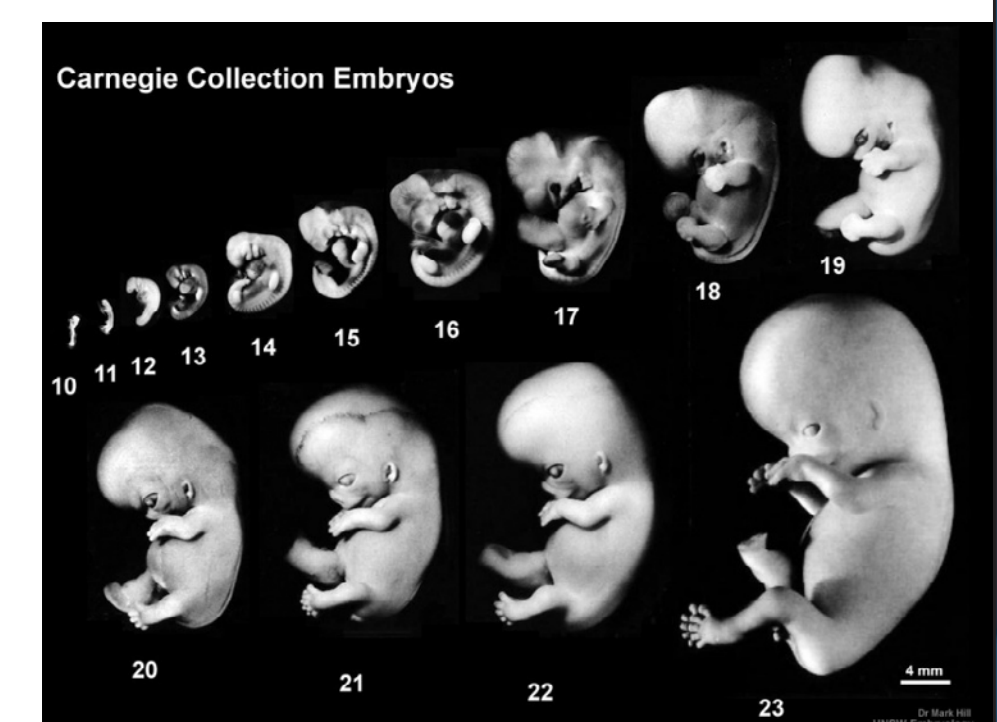
### Uncovering candidate Y genes using bulk RNA sequencing



### Compare XX vs. XY across time



Lizard Embryo Development



Human Embryo Development