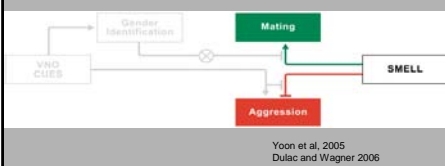


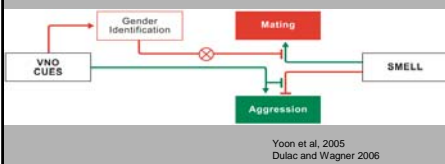
Sex and Smell

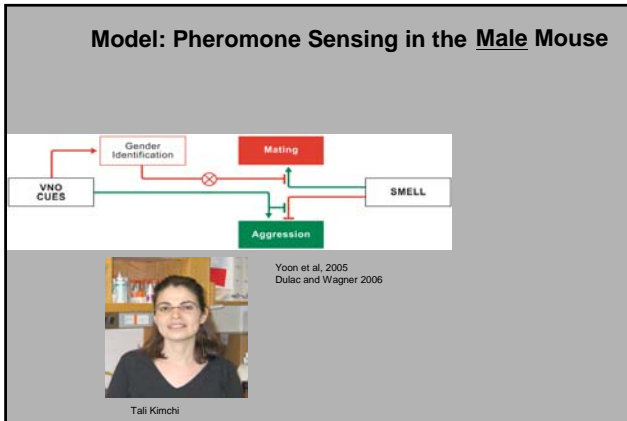
- Introduction: genes and chemosensory detection
- Molecular biology of pheromone perception
- Sex-specificity of pheromone responses

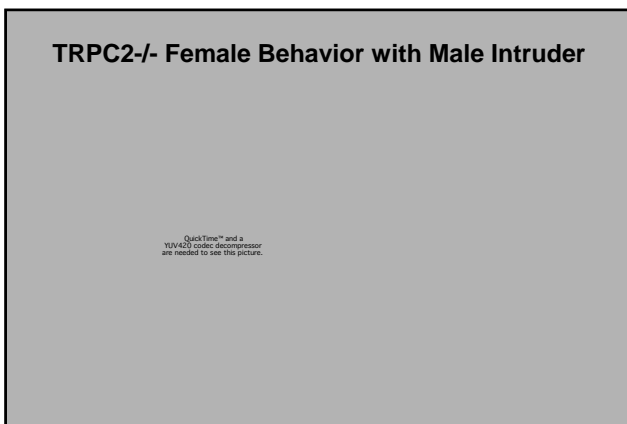
Model: Pheromone Sensing in the Mouse

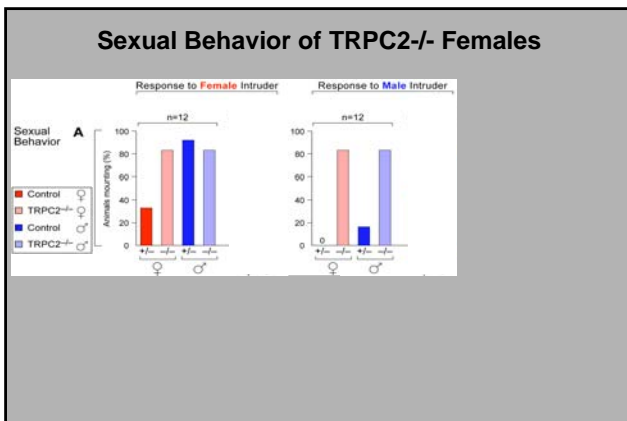


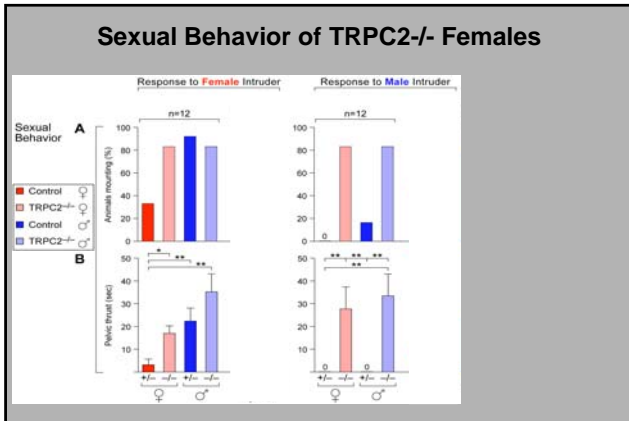
Model: Pheromone Sensing in the Mouse

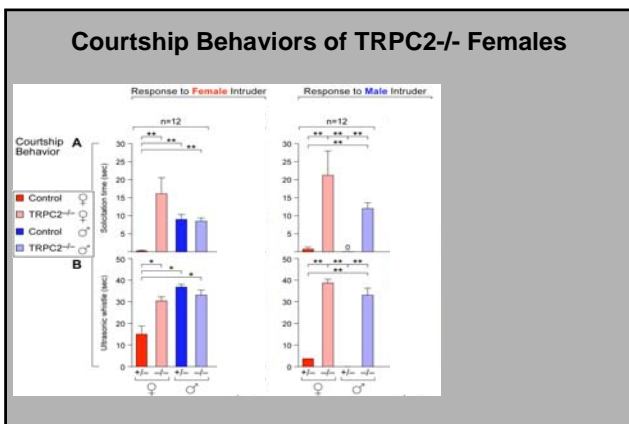


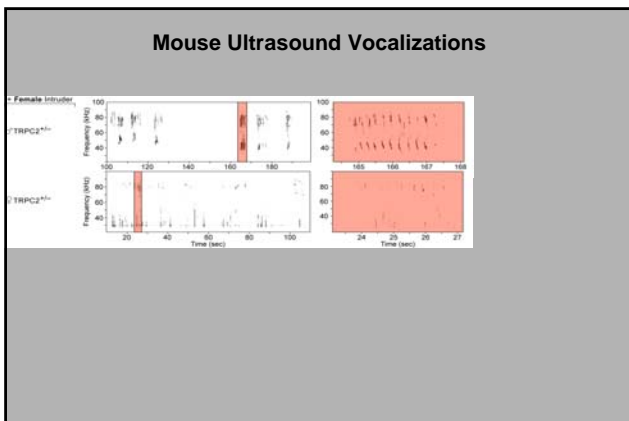


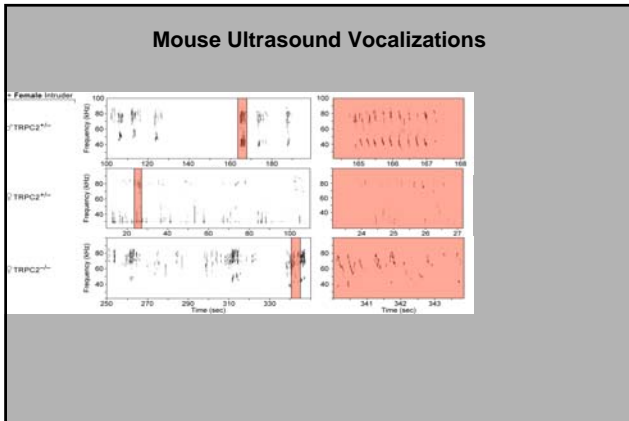


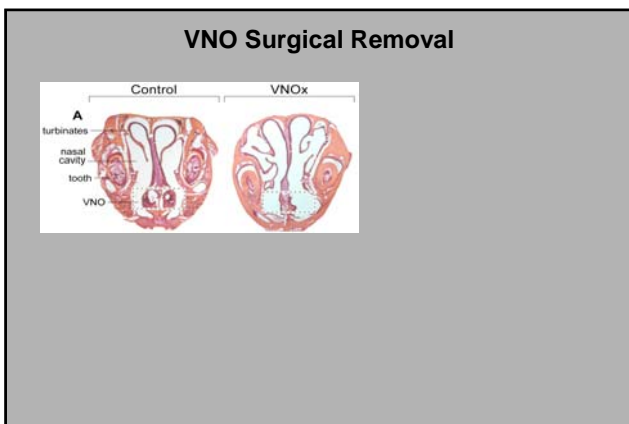


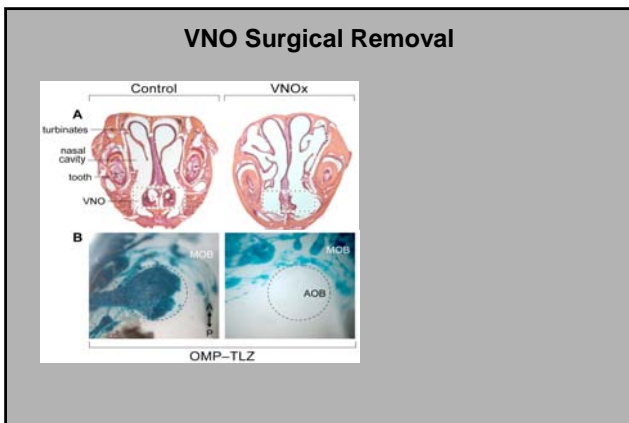


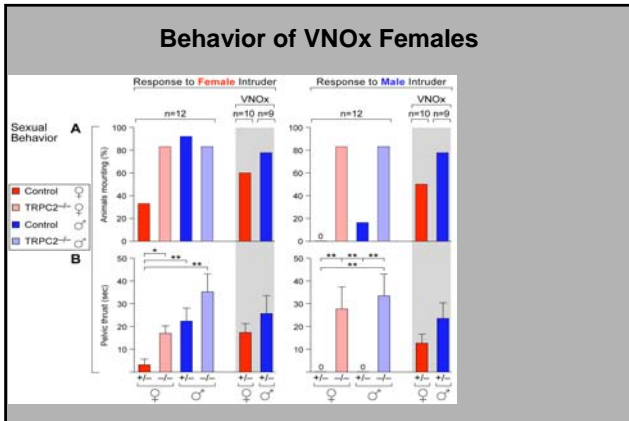


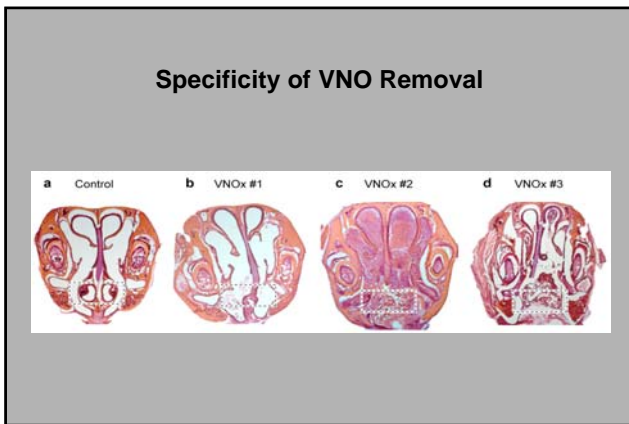


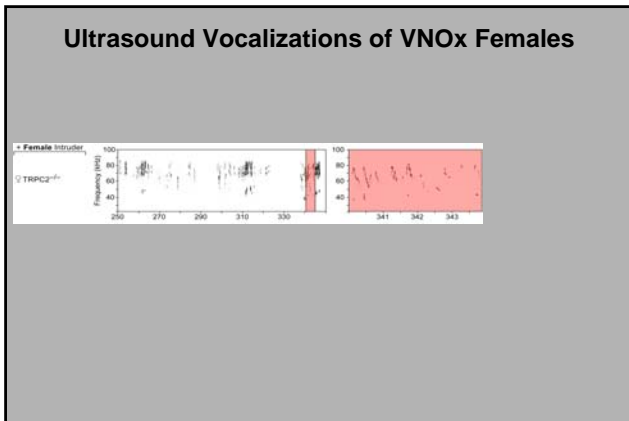


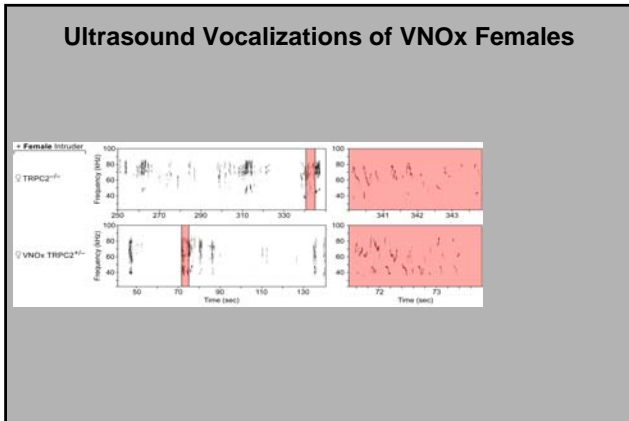


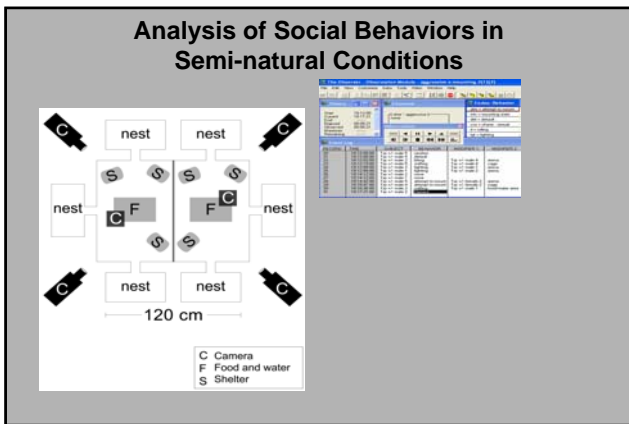


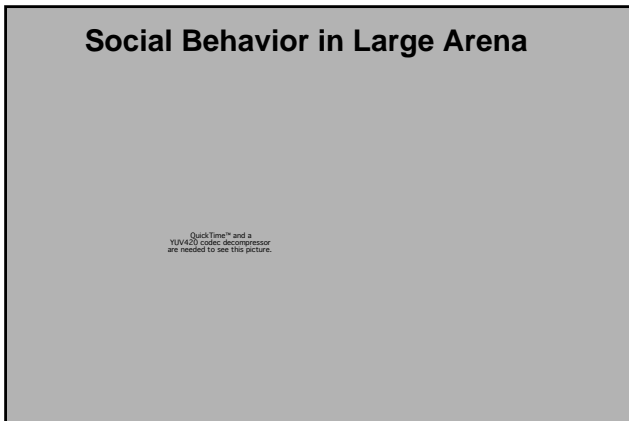


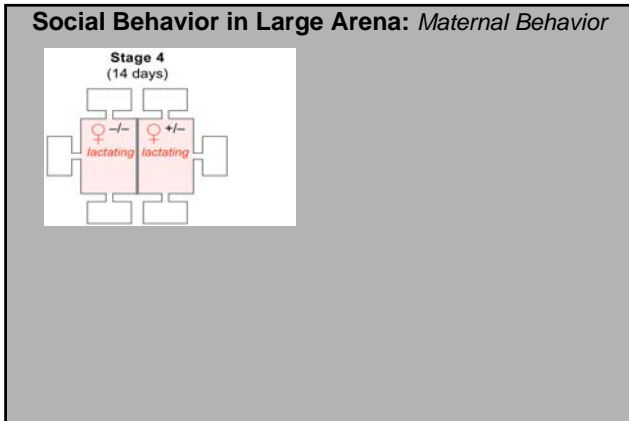


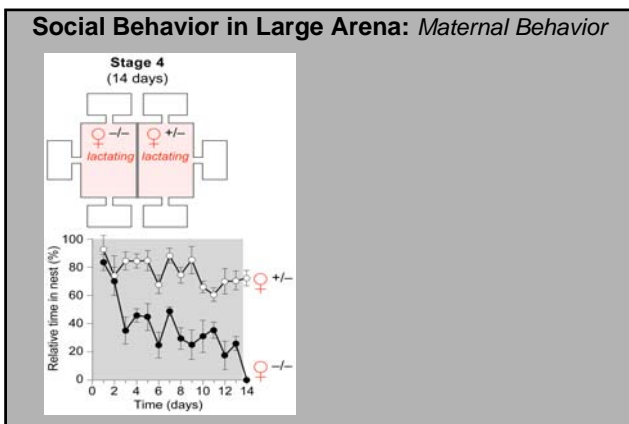


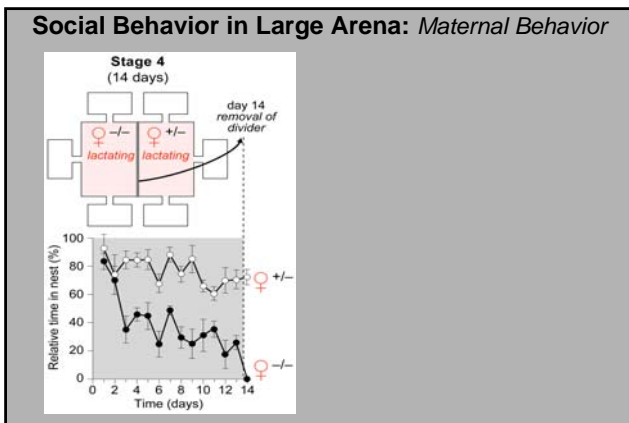






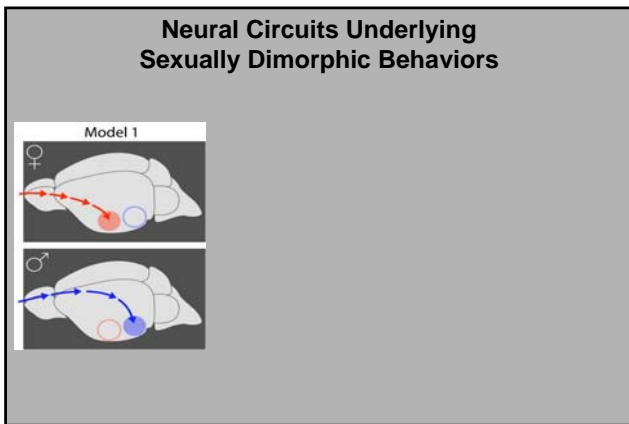


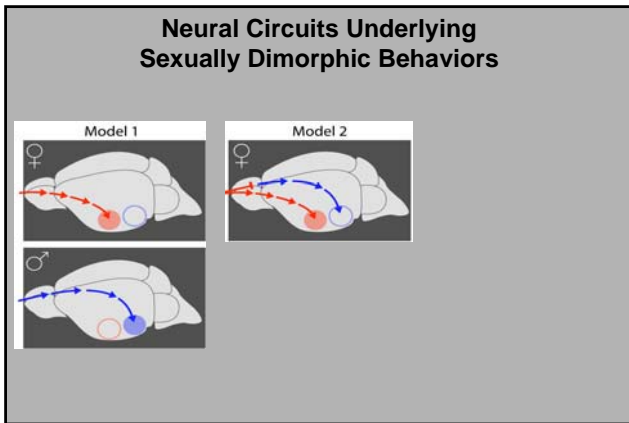


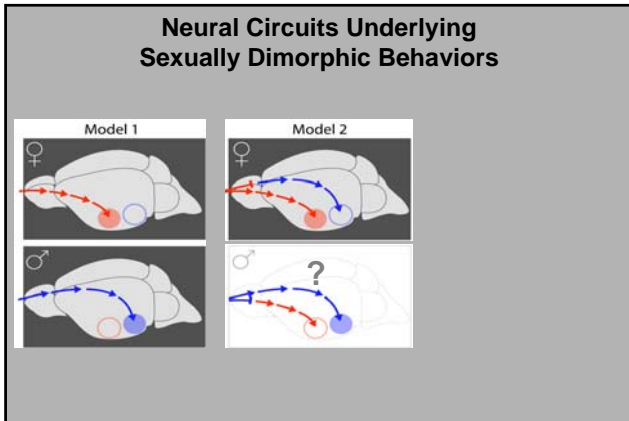


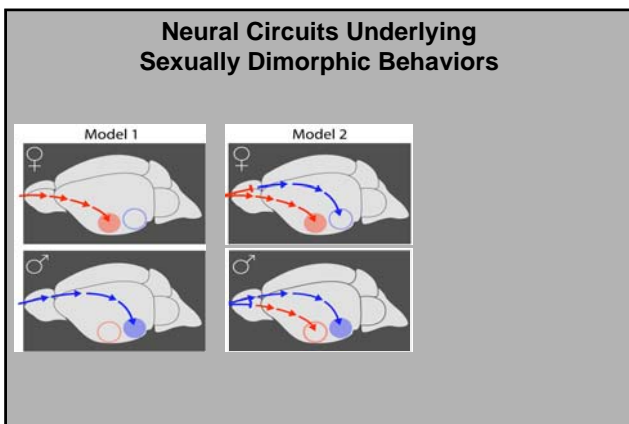
Hormone Levels in TRPC2^{-/-}

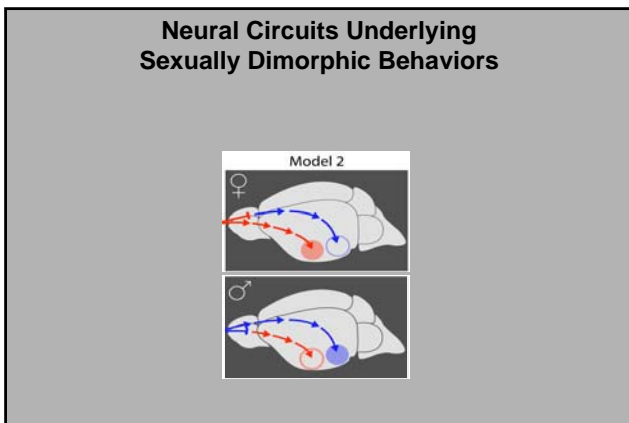
	TRPC2 ^{+/-}	TRPC2 ^{-/-}	P value
Weight of animals (grams)			
Males (n=15)	25.67 ± 0.66	25.96 ± 0.68	NS
Females (n=26)	21.41 ± 0.69	22.43 ± 0.56	NS
Duration of estrous cycle (days)			
Females (n=10)	5.20 ± 0.25	5.40 ± 0.26	NS
Steroid hormone level in blood			
Total testosterone (ng/ml)			
Males (n=5)	3.10 ± 0.30	4.50 ± 0.60	NS
Females (n=6)	<0.1	<0.1	
Free testosterone (pg/ml)			
Males (n=5)	14.10 ± 1.30	15.30 ± 1.50	NS
Females (n=6)	0.19 ± 0.07	0.41 ± 0.03	<0.05
17-β estradiol (pg/ml)			
Males (n=5)	21.31 ± 3.20	20.58 ± 2.80	NS
Females (n=6)	14.29 ± 2.10	14.91 ± 1.50	NS



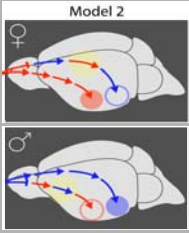








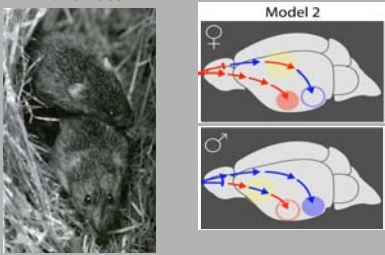
Neural Circuits Underlying Sexually Dimorphic Behaviors



The diagram shows two brain sections labeled 'Model 2'. The top section is for a female (♀) and the bottom for a male (♂). Both show a red nucleus and a blue nucleus. In the female, red and blue pathways connect the red nucleus to the blue nucleus. In the male, the pathways are more complex, involving additional yellow and blue nodes.

Neural Circuits Underlying Sexually Dimorphic Behaviors

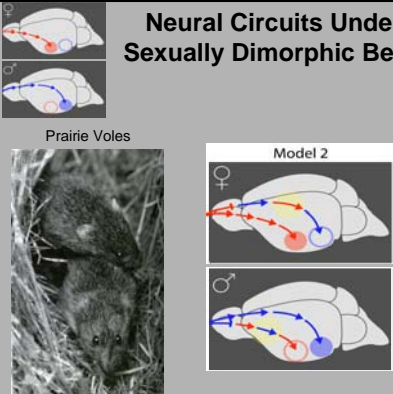
Prairie Voles



T. Insel, L. Young

The slide includes a photograph of a prairie vole on the left and the 'Model 2' neural circuitry diagram on the right, showing the same red and blue nuclei and pathways as the first slide.

Neural Circuits Underlying Sexually Dimorphic Behaviors

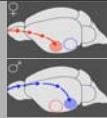


Prairie Voles


T. Insel, L. Young

This slide features a smaller version of the 'Model 2' diagram in the top left and a photograph of prairie voles in the bottom left. The diagram shows the red and blue nuclei and their interconnections.

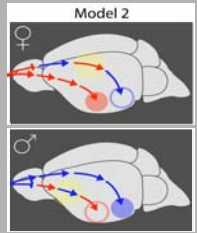
Neural Circuits Underlying Sexual Dimorphic Behaviors



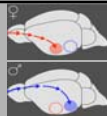
The "Old" Dads




Model 2



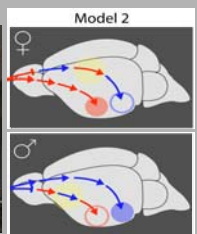
Neural Circuits Underlying Sexually Dimorphic Behaviors



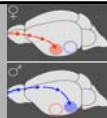
The "New" Dads



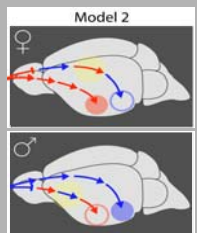
Model 2

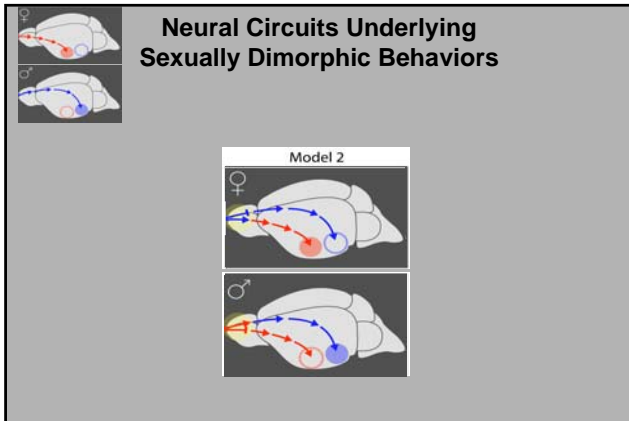


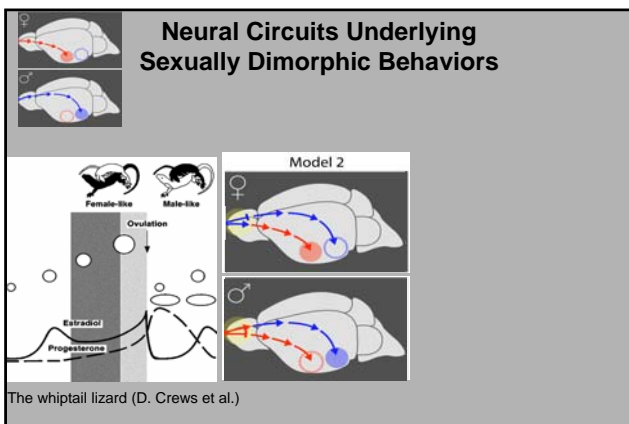
Neural Circuits Underlying Sexually Dimorphic Behaviors

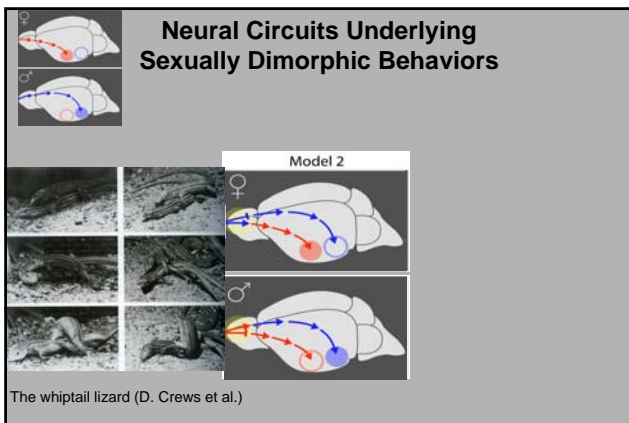


Model 2







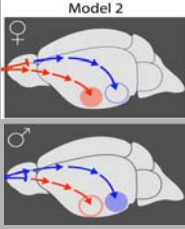


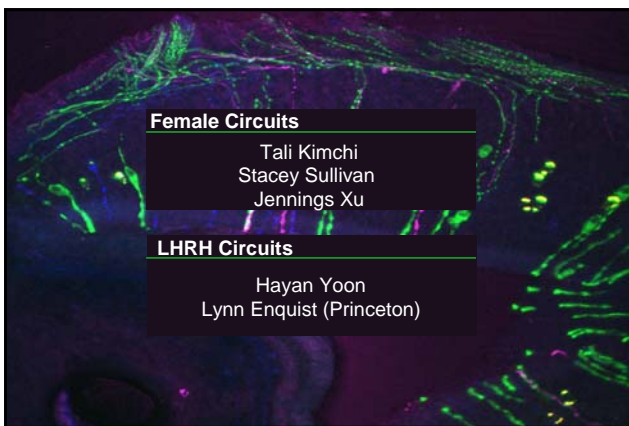
Neural Circuits Underlying Sexually Dimorphic Behaviors

Future plans:
Mechanistic study

- What are the switches
- What are the circuit components
- How do they operate and what are the time frames of behavior changes

Model 2





Female Circuits
Tali Kimchi
Stacey Sullivan
Jennings Xu

LHRH Circuits
Hayan Yoon
Lynn Enquist (Princeton)
