

# PSYCH 260/BBH 203

Exam 2 Review

Rick O. Gilmore

2022-02-24 10:36:40

# Methods

- Structural vs. functional methods

# Neuroanatomy

- Autonomic (ANS) vs. somatic divisions of the Peripheral Nervous System
  - Sympathetic vs. parasympathetic branches of ANS

# Cellular neuroscience

- Glial types and functions
- Anatomy of neurons
  - Gap junctions as a type of synapse

# Neurophysiology

- Resting potential – what & why
  - $[K^+]$  story (where concentrated, direction of flow)
  - $[Na^+]$  story (where concentrated, direction of flow)
- Action potential and propagation – how & why
- Steps leading to neurotransmitter release

# Neurochemistry

- Neurotransmitter types
  - Amino acids, especially glutamate and GABA
  - Acetylcholine
  - Monoamines

# Neurochemistry

- NT anatomy (where released) and function
- Receptor types: ionotropic vs. metabotropic
- Inactivation mechanisms & rationale for inactivation
- EPSPs & IPSPs

# Hormones

- Behaviors under hormonal influence
- Hormone anatomy: Where released
- Direct (posterior pituitary) vs. indirect (anterior) release from hypothalamus
- Responses to threat/challenge
  - HPA axis, SAM response/axis
- Milk letdown reflex



# Brain evolution

- When did complex animals (and nervous systems) emerge?
- How are vertebrate brains similar/different?
- Patterns of brain/body mass across vertebrates
- Human brains vs. other animal brains