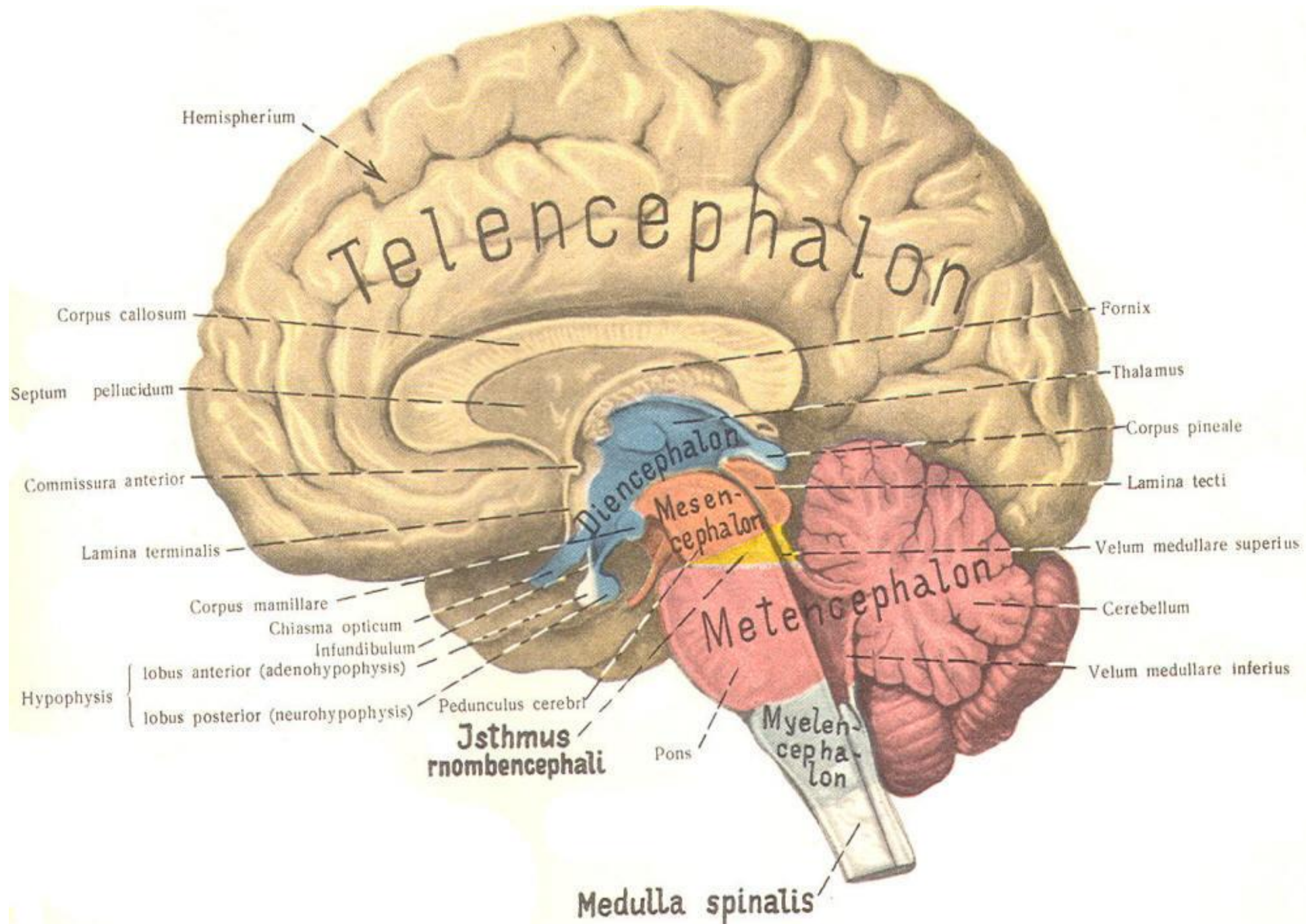
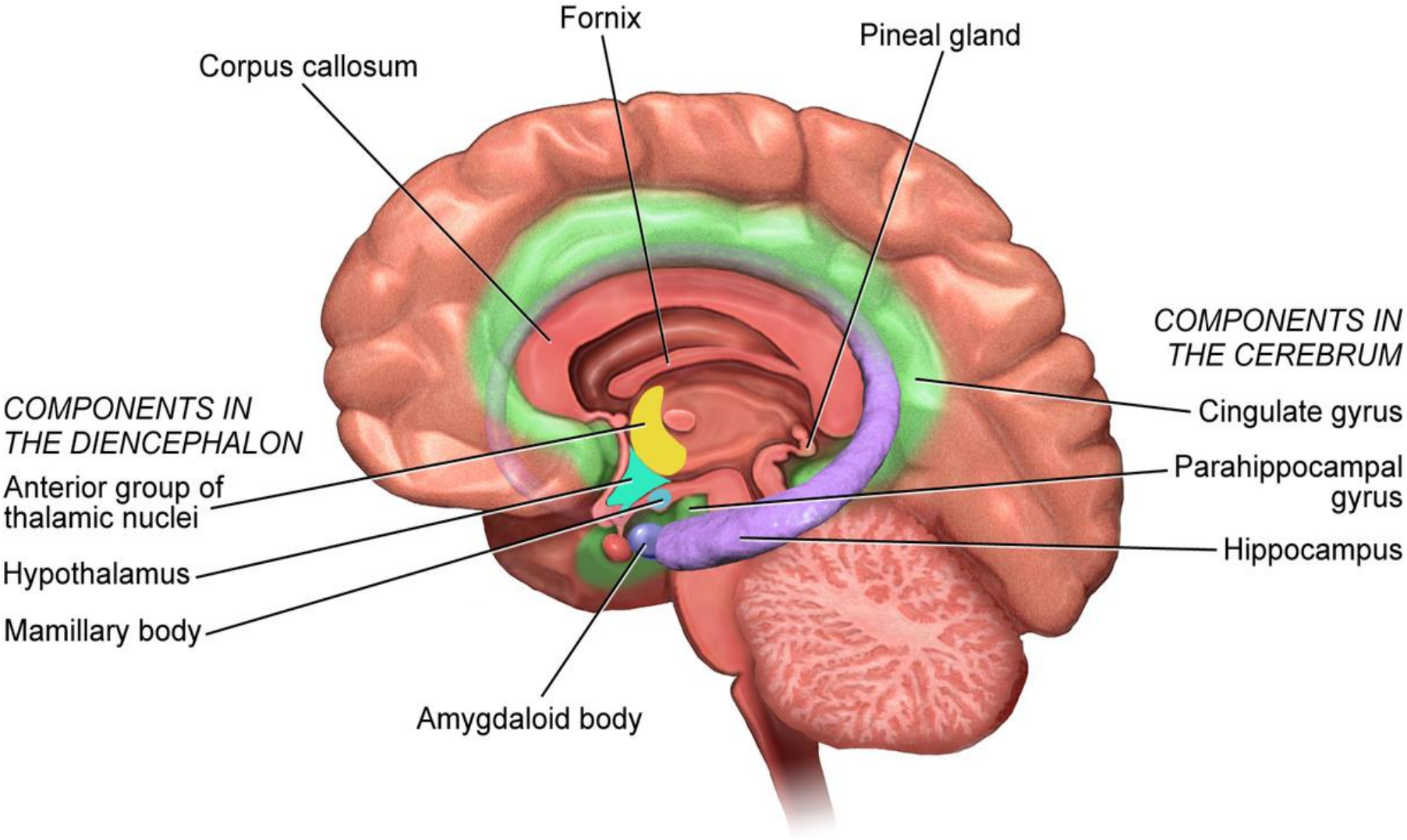


فیزیولوژی اعصاب و غدد، جلسہ پنجم

تشریح فیزیولوژیکی مغز (قسمت دوم)



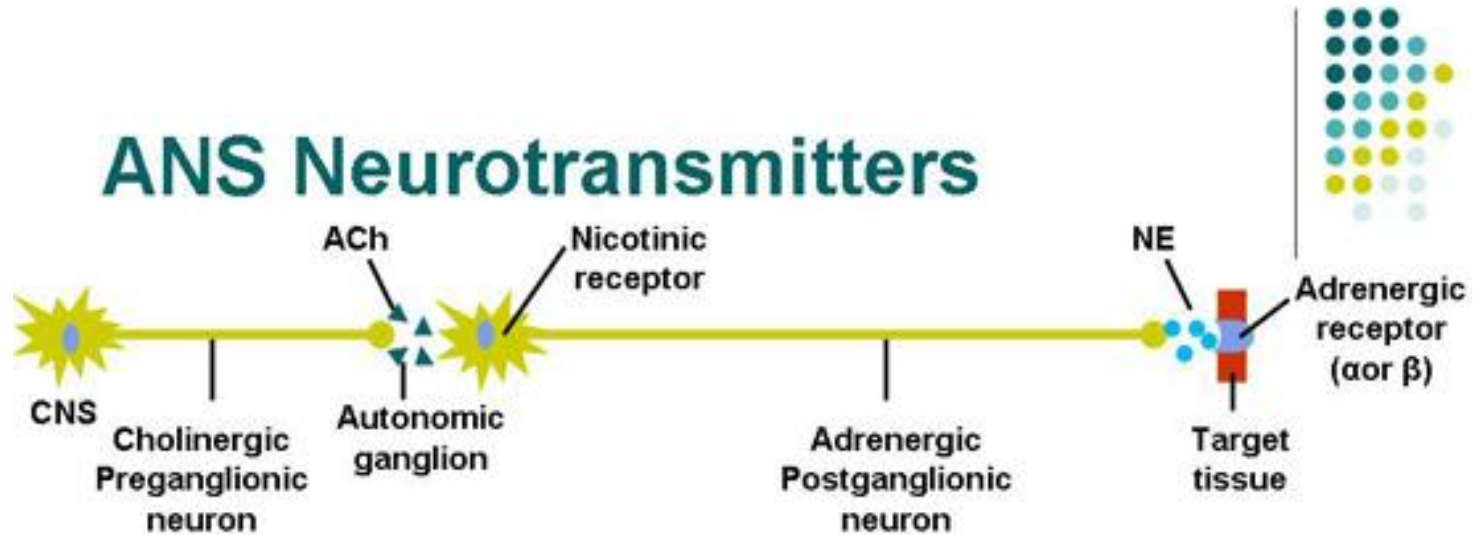
The Limbic System



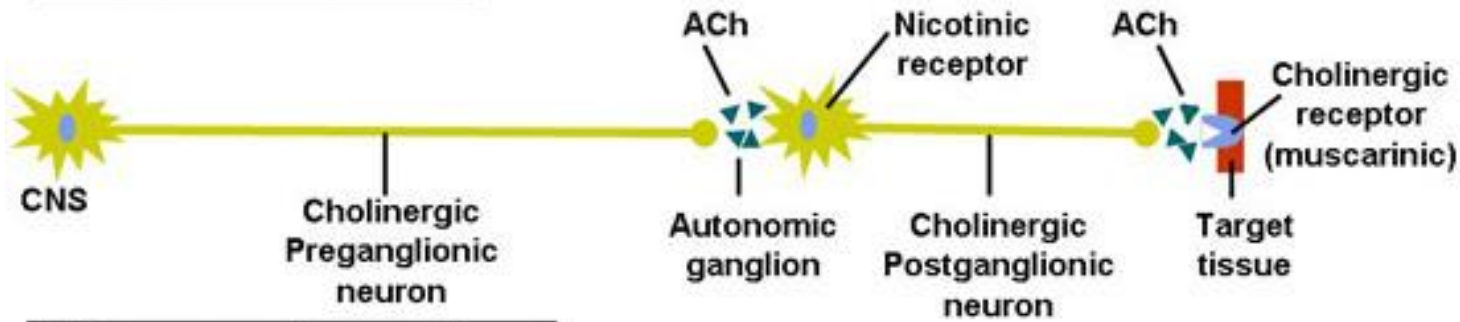
فیزیولوژی اعصاب و غدد، جلسه ششم

دستگاه عصبی خود مختار

ANS Neurotransmitters



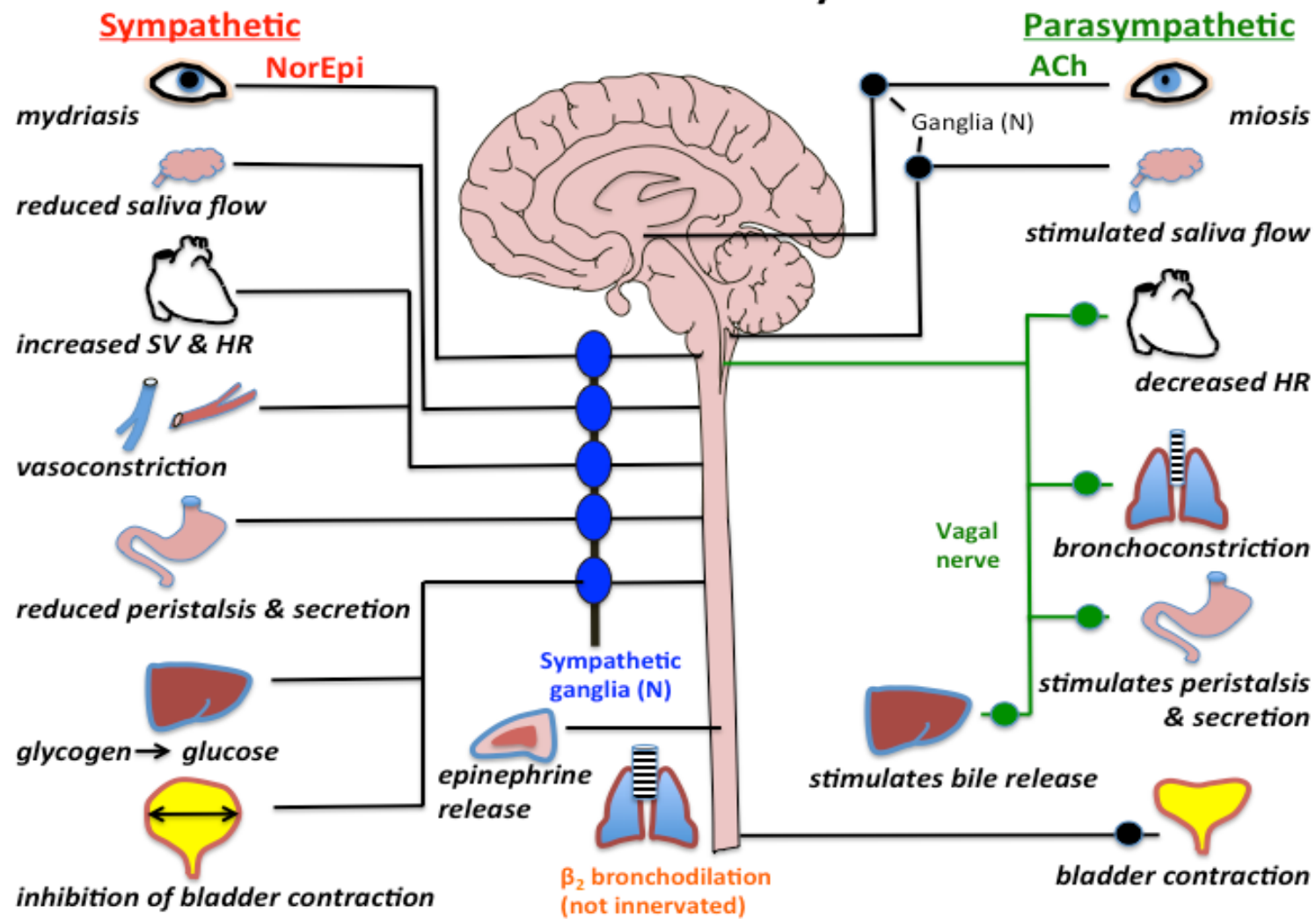
A) Sympathetic pathway



B) Parasympathetic pathway

ACh = Acetylcholine
NE = Norepinephrine

The Autonomic Nervous System

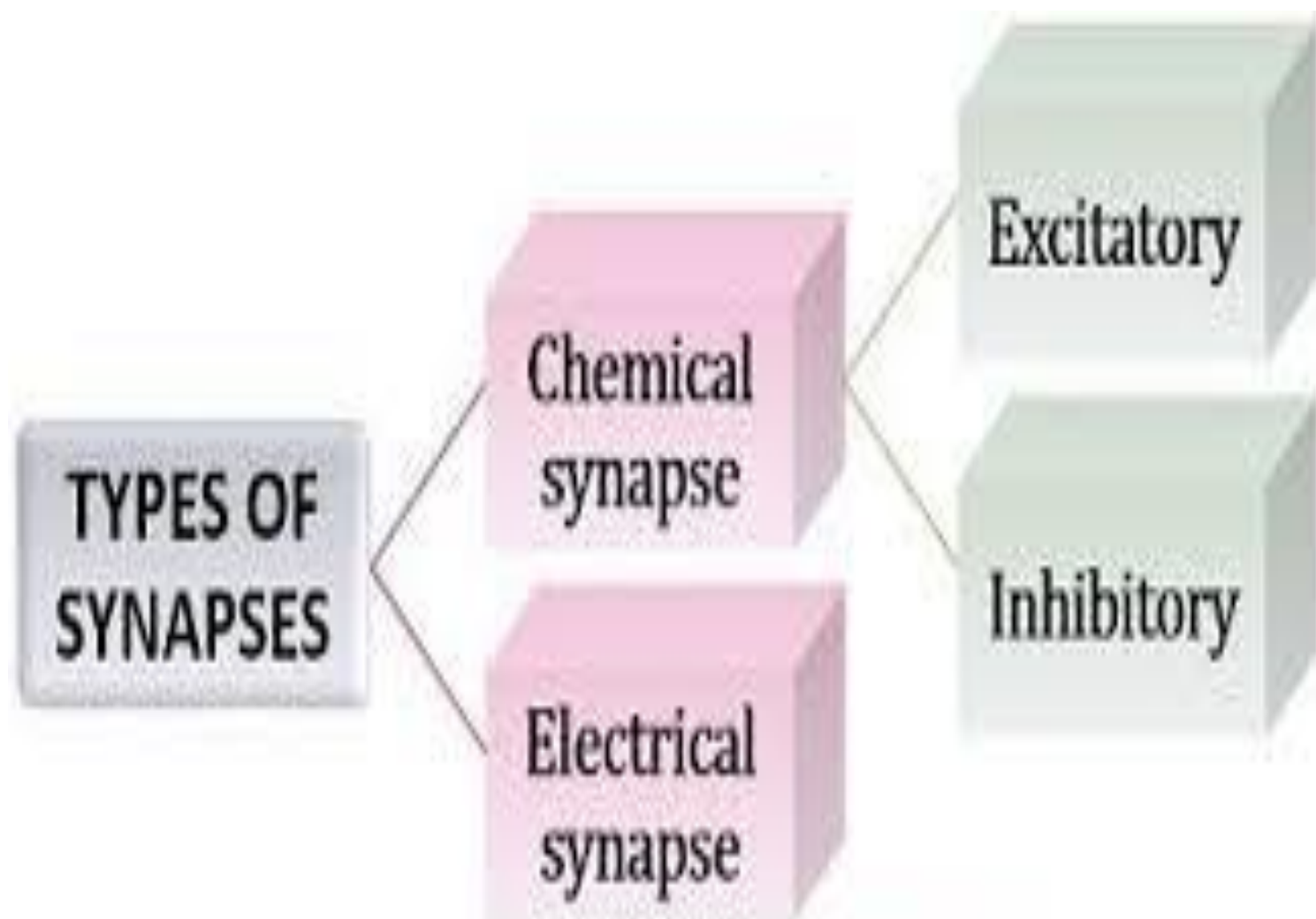


فیزیولوژی اعصاب و غدد، جلسه هفتم

سیناپس و انواع آن

وقایع سیناپسی

ماهیت تحریکی و مهاری و شدت مخابره پیام در سیناپس



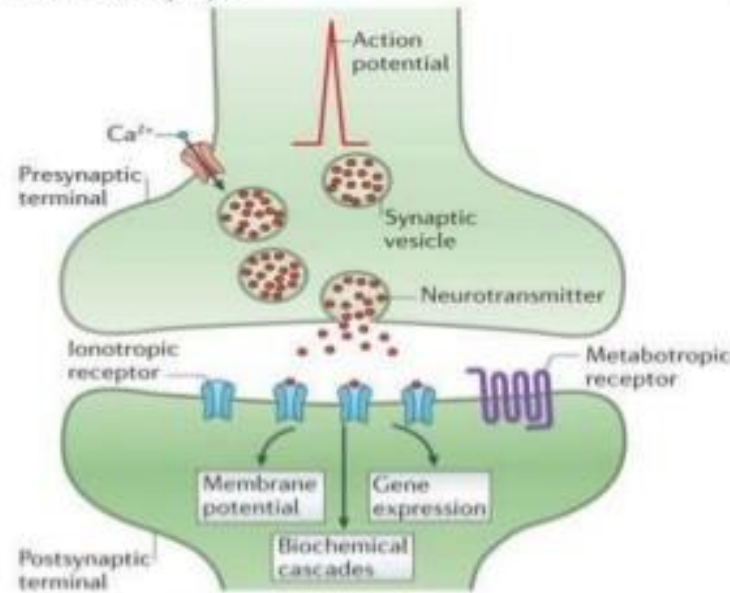
BIOLOGY READER

Synapse

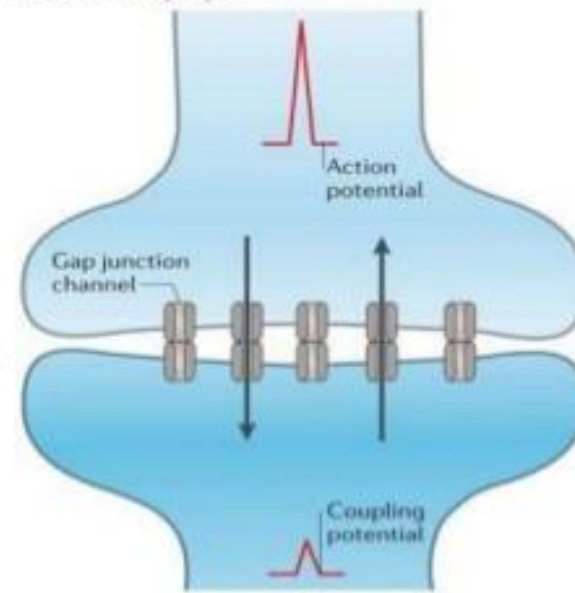
- **Types of synapse**

- Electrical synapse Vs Chemical synapse

a Chemical synapse



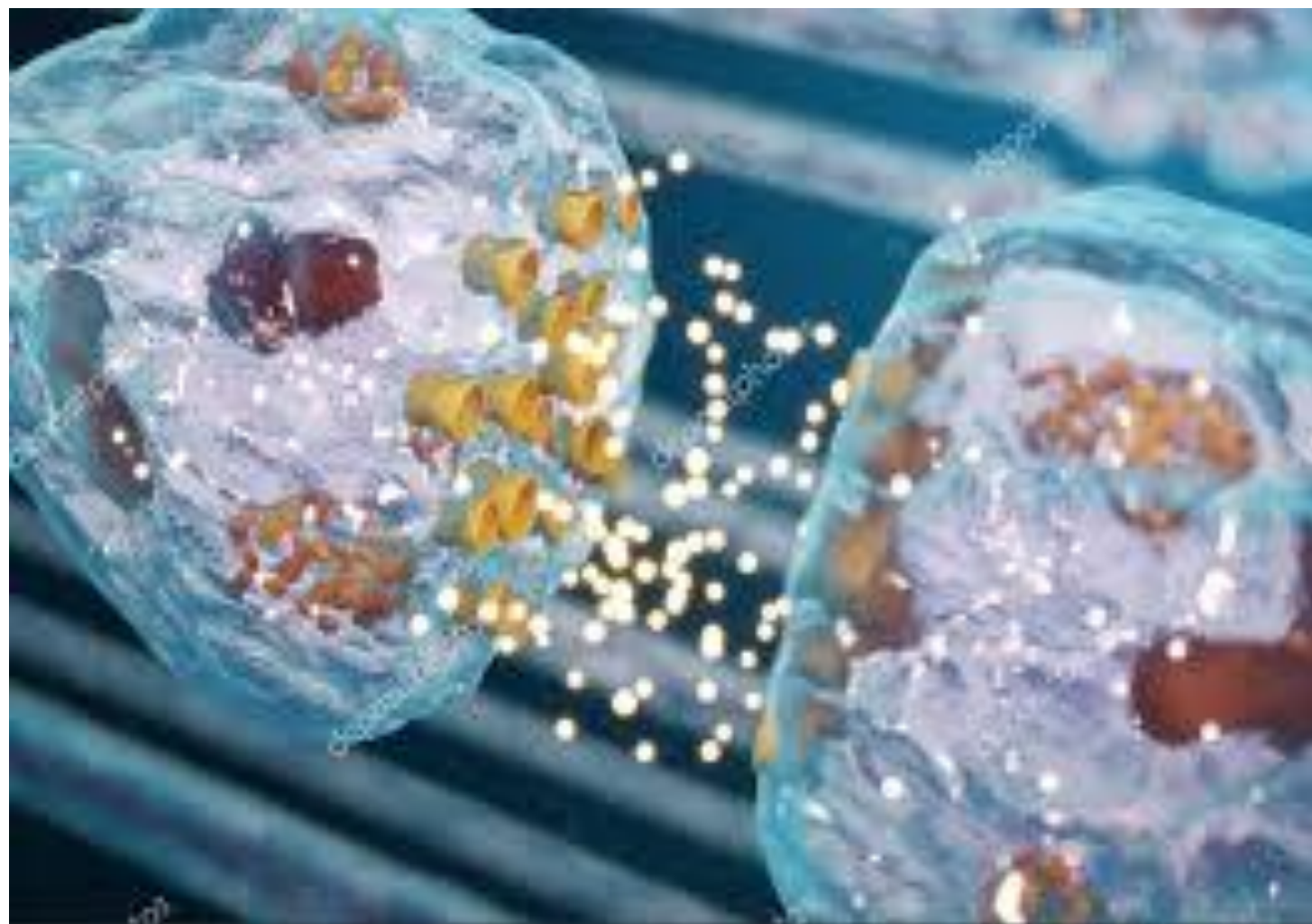
b Electrical synapse

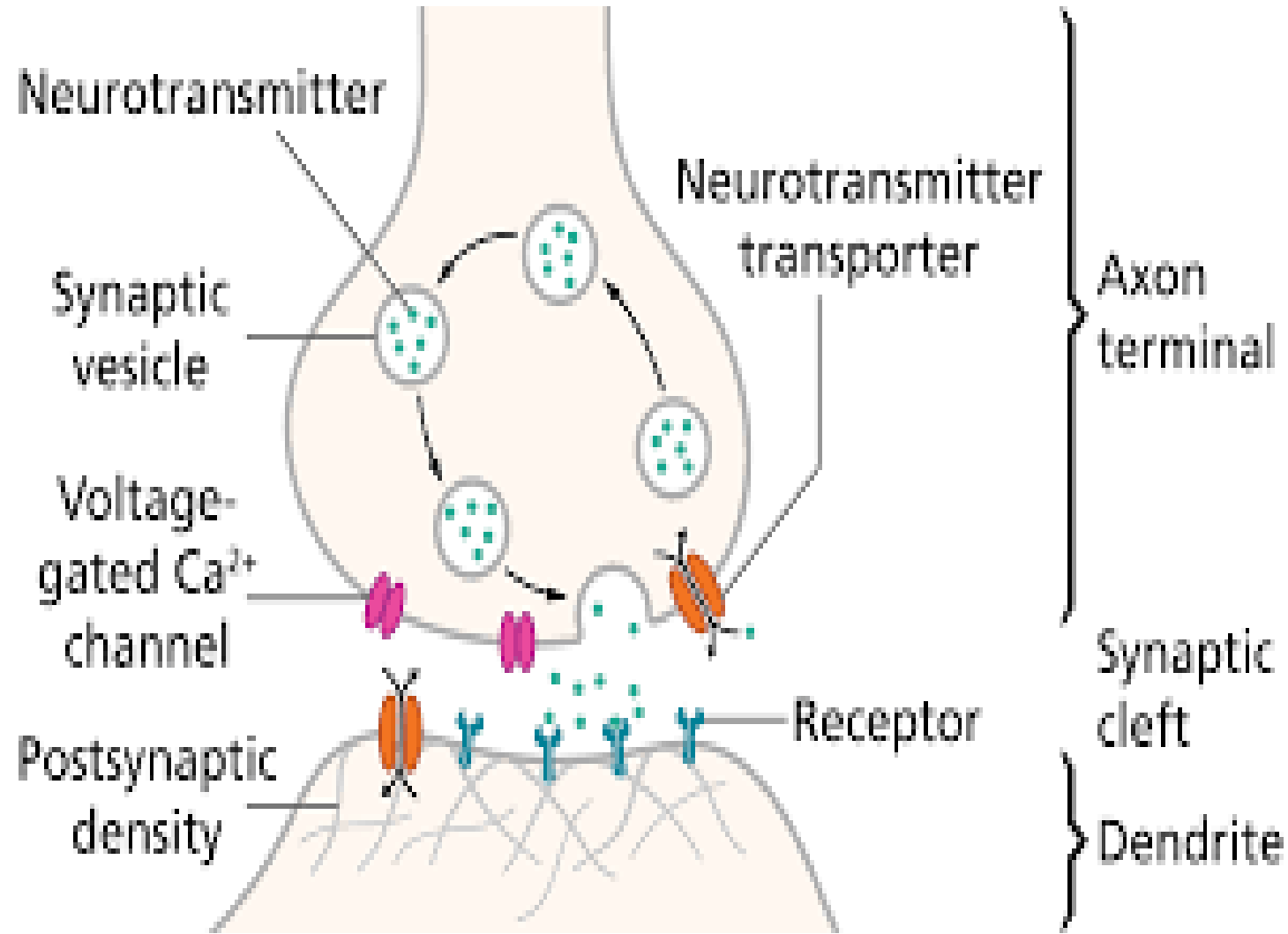


Nature Reviews | Neuroscience

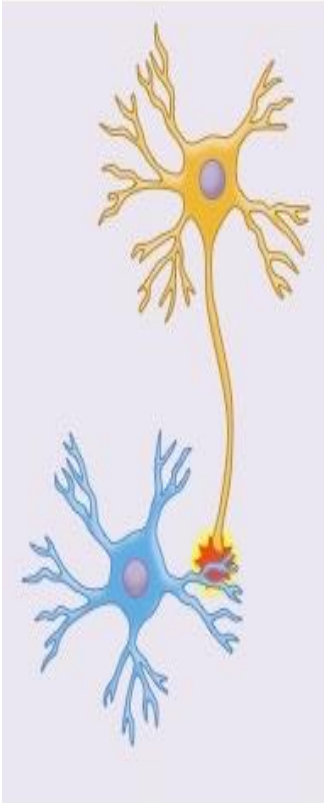
Ref: Pereda AE. Electrical synapses and their functional interactions with chemical synapses. Nature Reviews Neuroscience. 2014 ;15(4):250.



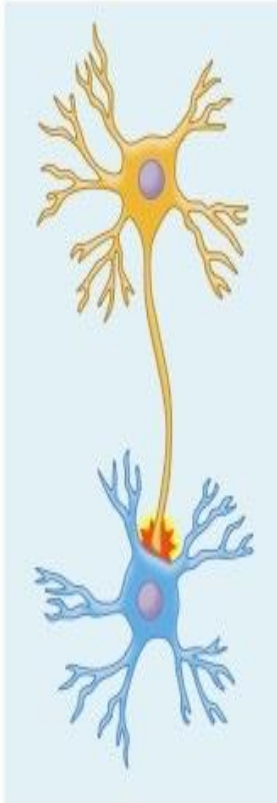




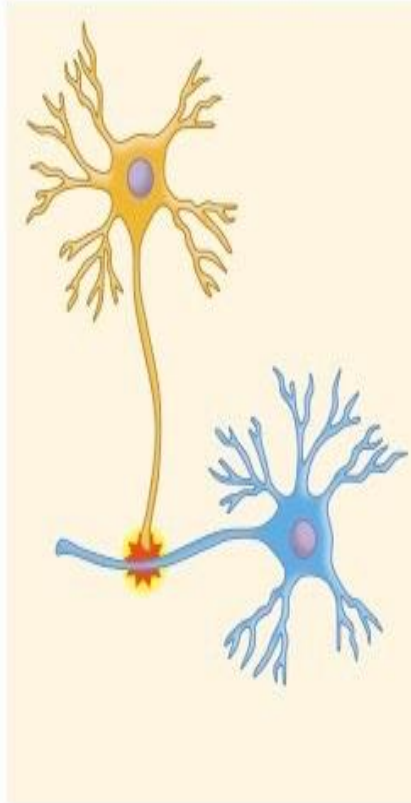
Axo-dendritic



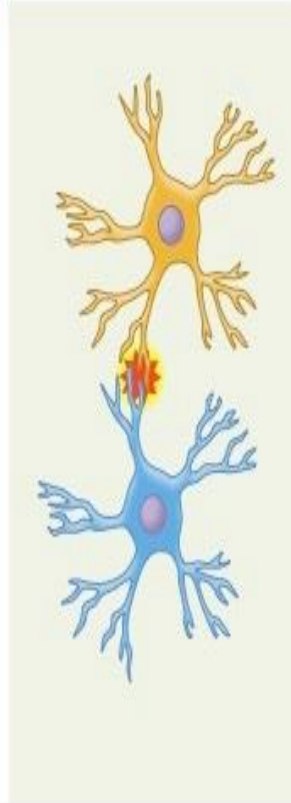
Axo-somatic



Axo-axonic

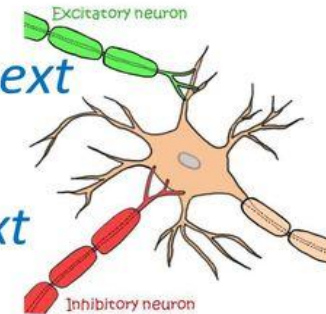


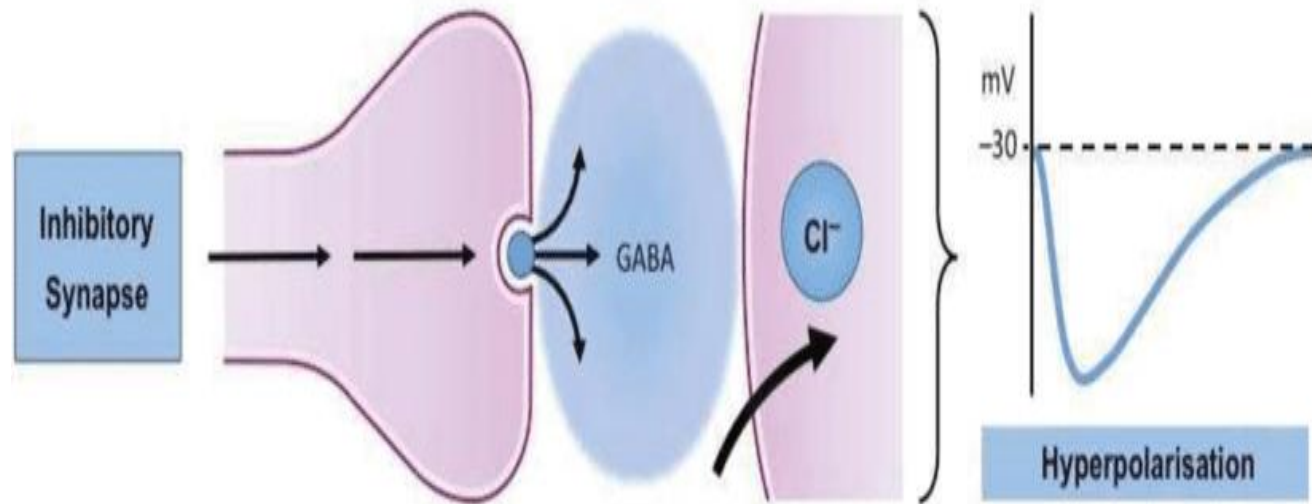
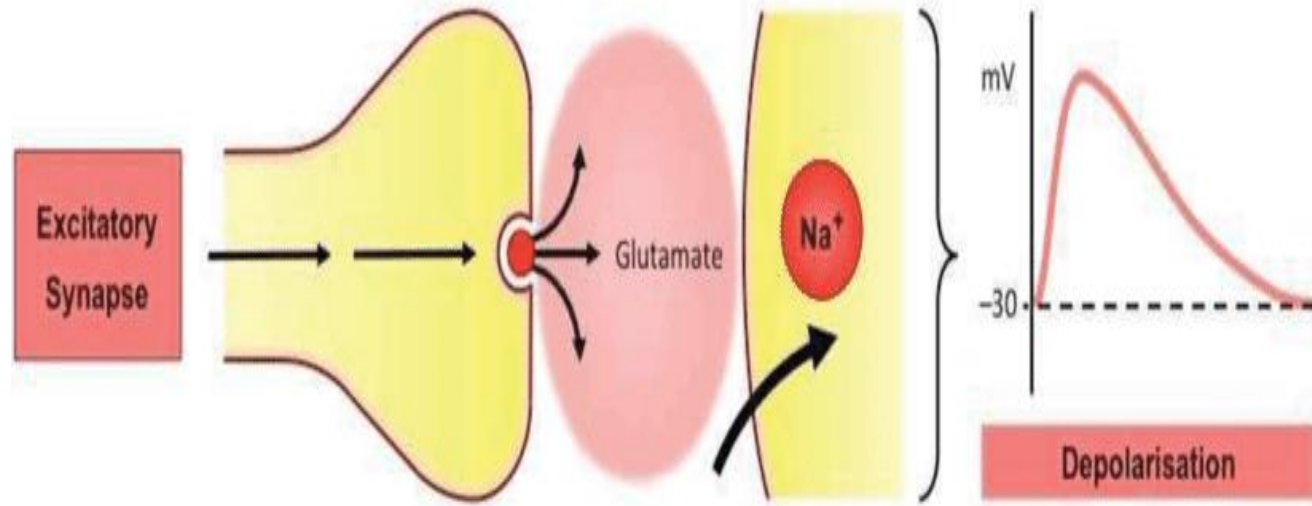
Dendro-dendritic



Excitation and inhibition

- Synaptic connections can be **excitatory** or **inhibitory** – the difference lies in the action of the neurotransmitter at the postsynaptic receptor
- Excitatory - *they make it more likely the next neuron will fire* (such as acetylcholine)
- Inhibitory - *they make it less likely the next neuron will fire* (such as GABA)
- Normal brain function depends upon a regulated balance between excitatory and inhibitory influences

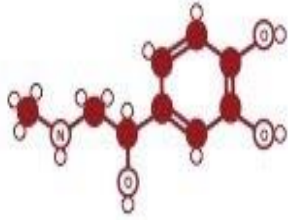




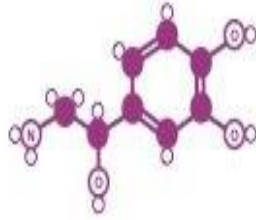
فیزیولوژی اعصاب و غدد، جلسه هشتم

۱- الکتروفیزیولوژی نورو

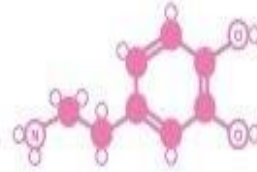
۲- پتانسیل های استراحت، عمل، آستانه ای و پس سیناپسی

ADRENALINE

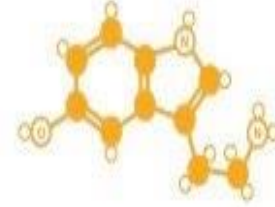
Fight or flight
neurotransmitter

NORADRENALINE

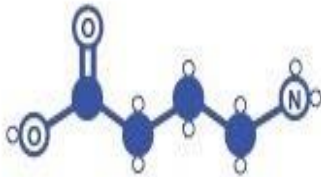
Concentration
neurotransmitter

DOPAMINE

Pleasure
neurotransmitter

SEROTONIN

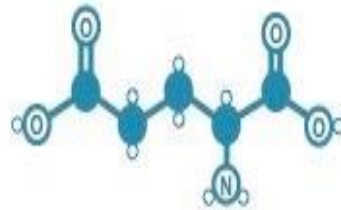
Mood
neurotransmitter

GABA

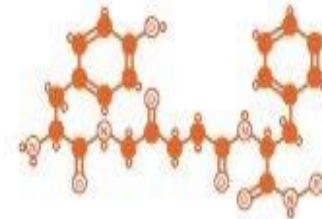
Calming
neurotransmitter

ACETYLCHOLINE

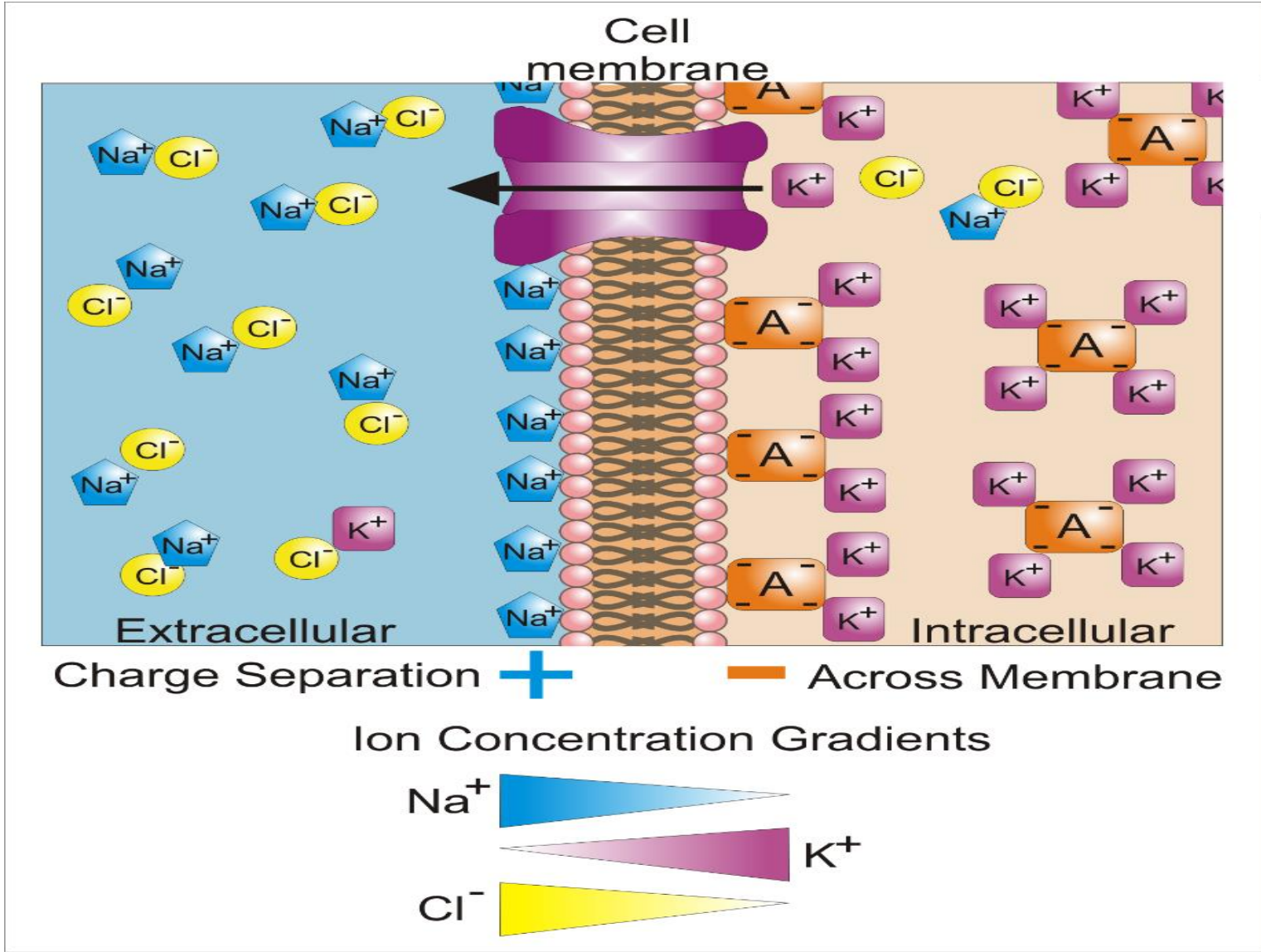
Learning
neurotransmitter

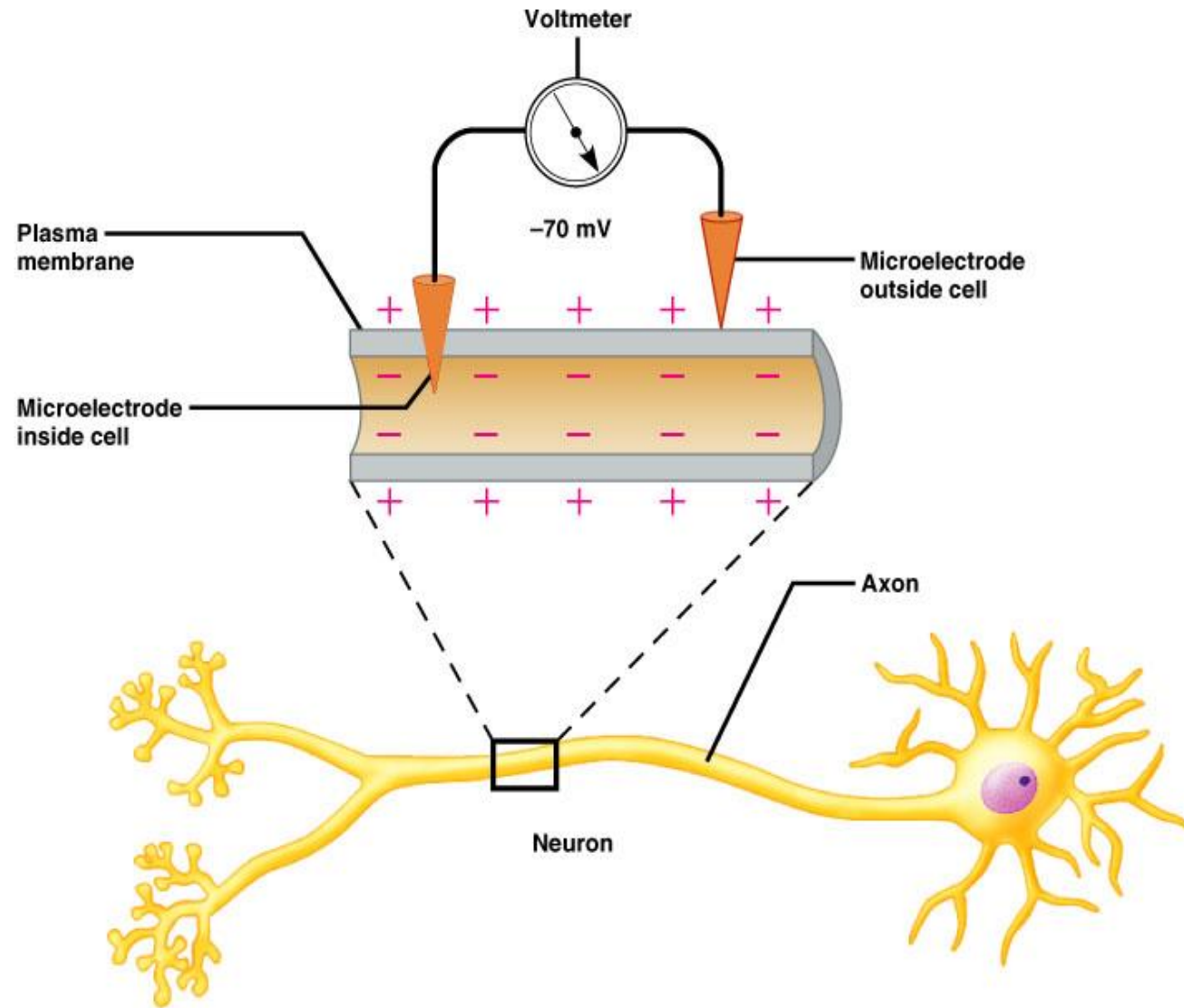
GLUTAMATE

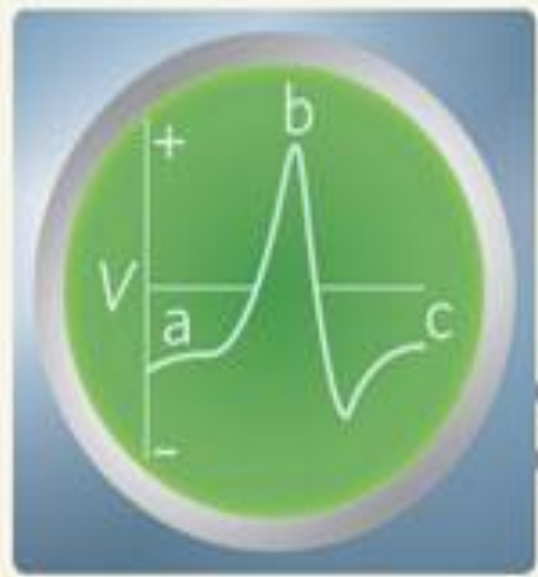
Memory
neurotransmitter

ENDORPHINS

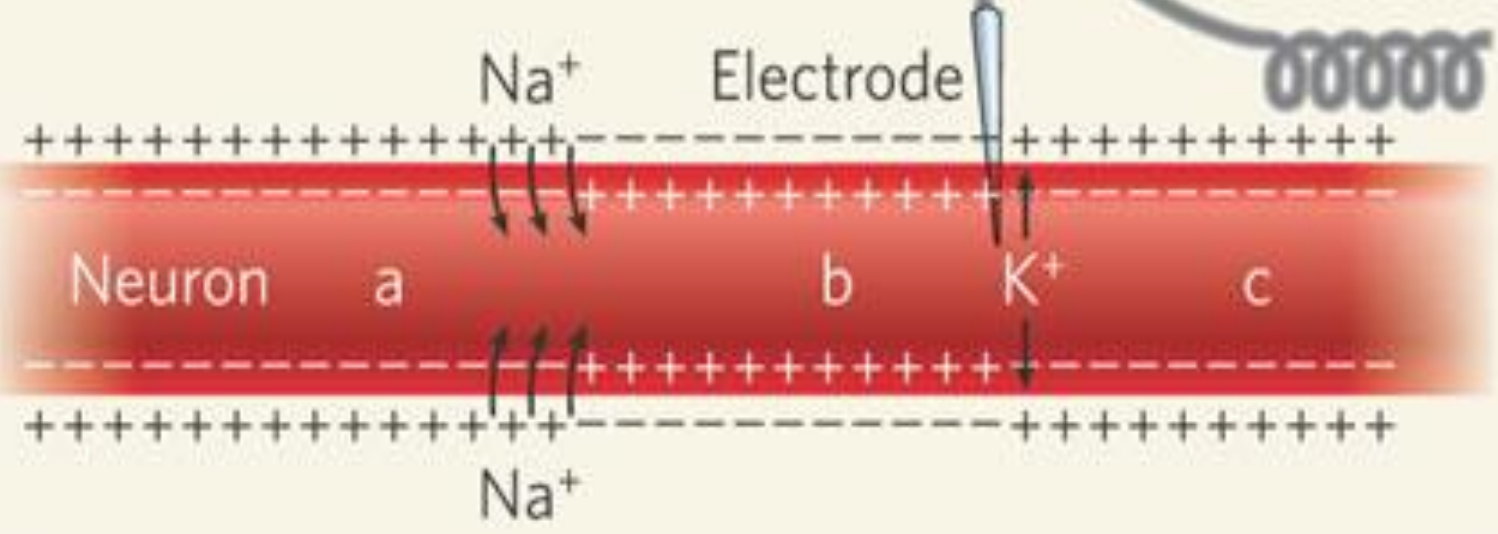
Euphoria
neurotransmitter







Oscilloscope



Na⁺

Electrode

Neuron

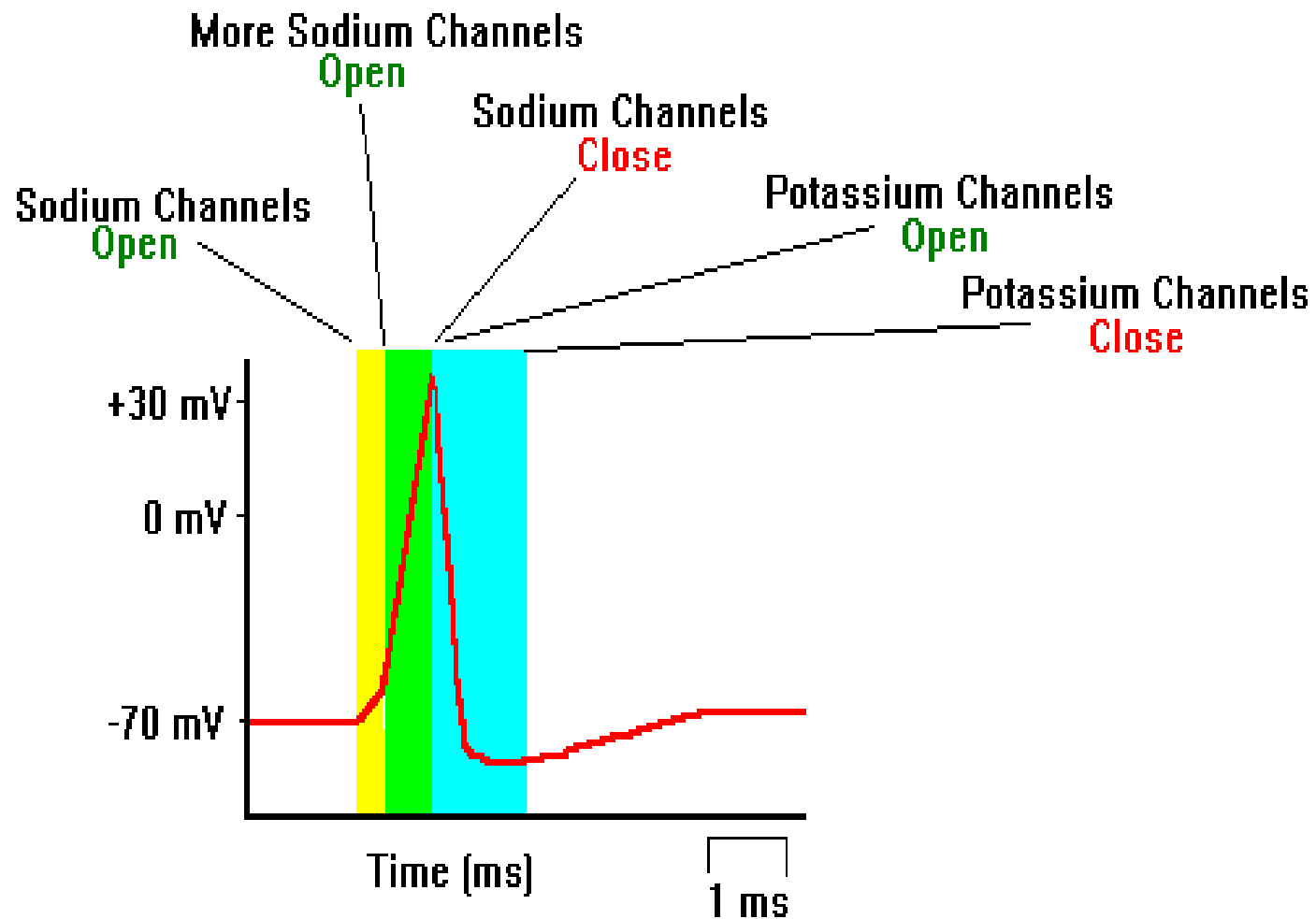
a

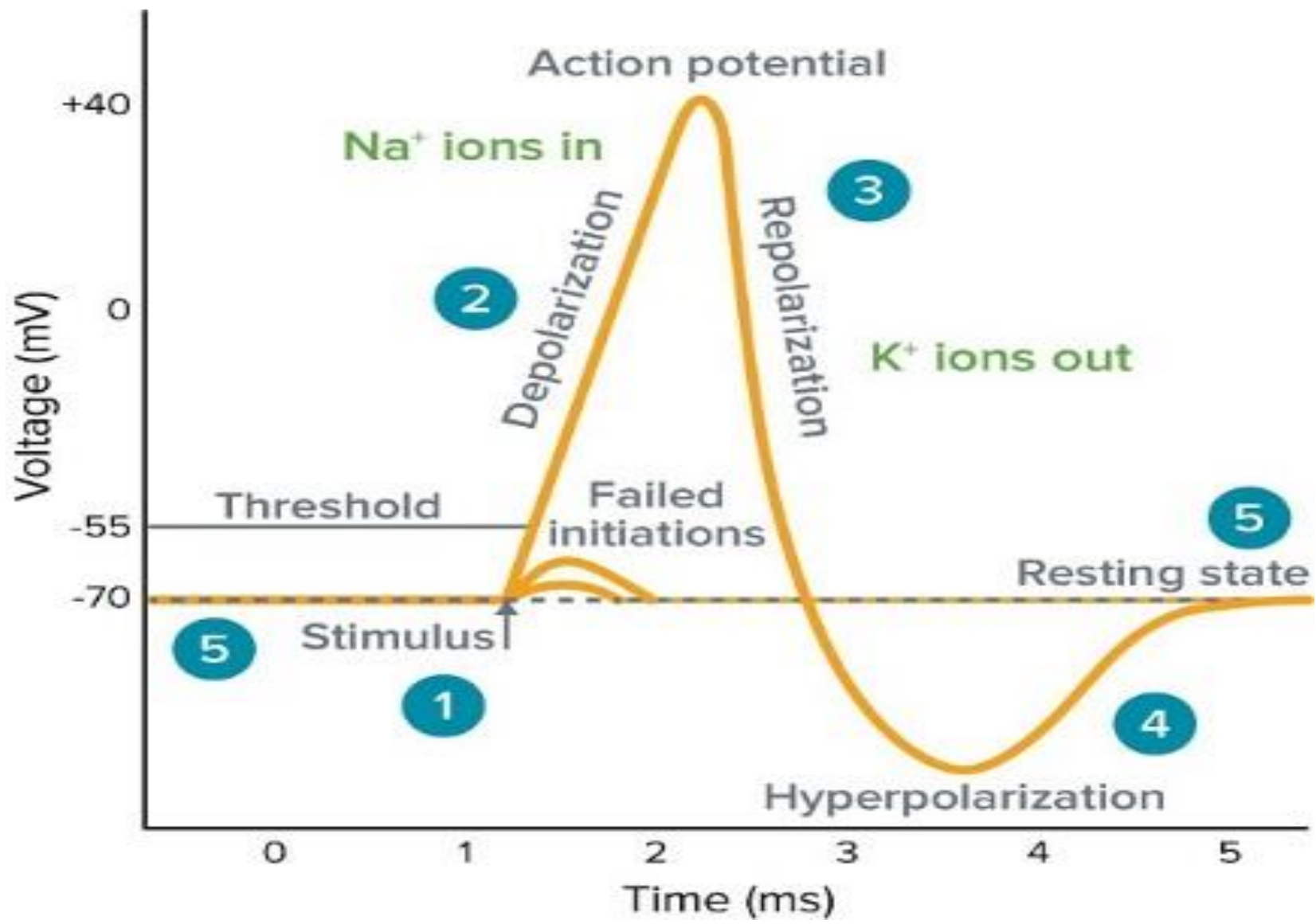
b

K⁺

c

Na⁺

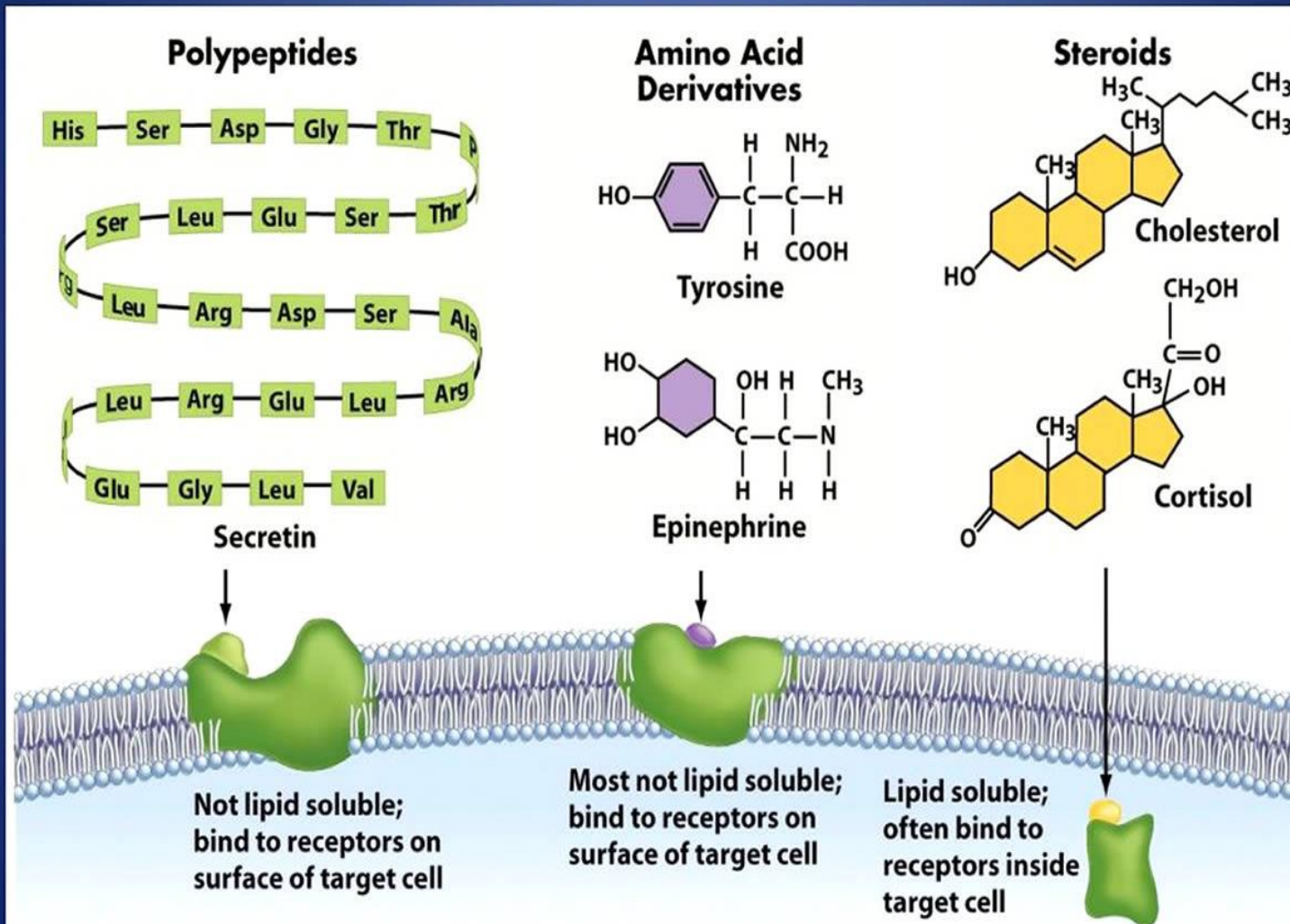




فیزیولوژی اعصاب و غدد، جلسه نهم

نگرشی بر هورمون، غده درون ریز، طبقه بندی هورمون ها و مقایسه آنها

Chemical Classes of Hormones



فیزیولوژی اعصاب و غدد، جلسه دهم

هیپوتالاموس و غده هیپوفیز، هورمون های هیپوفیزی

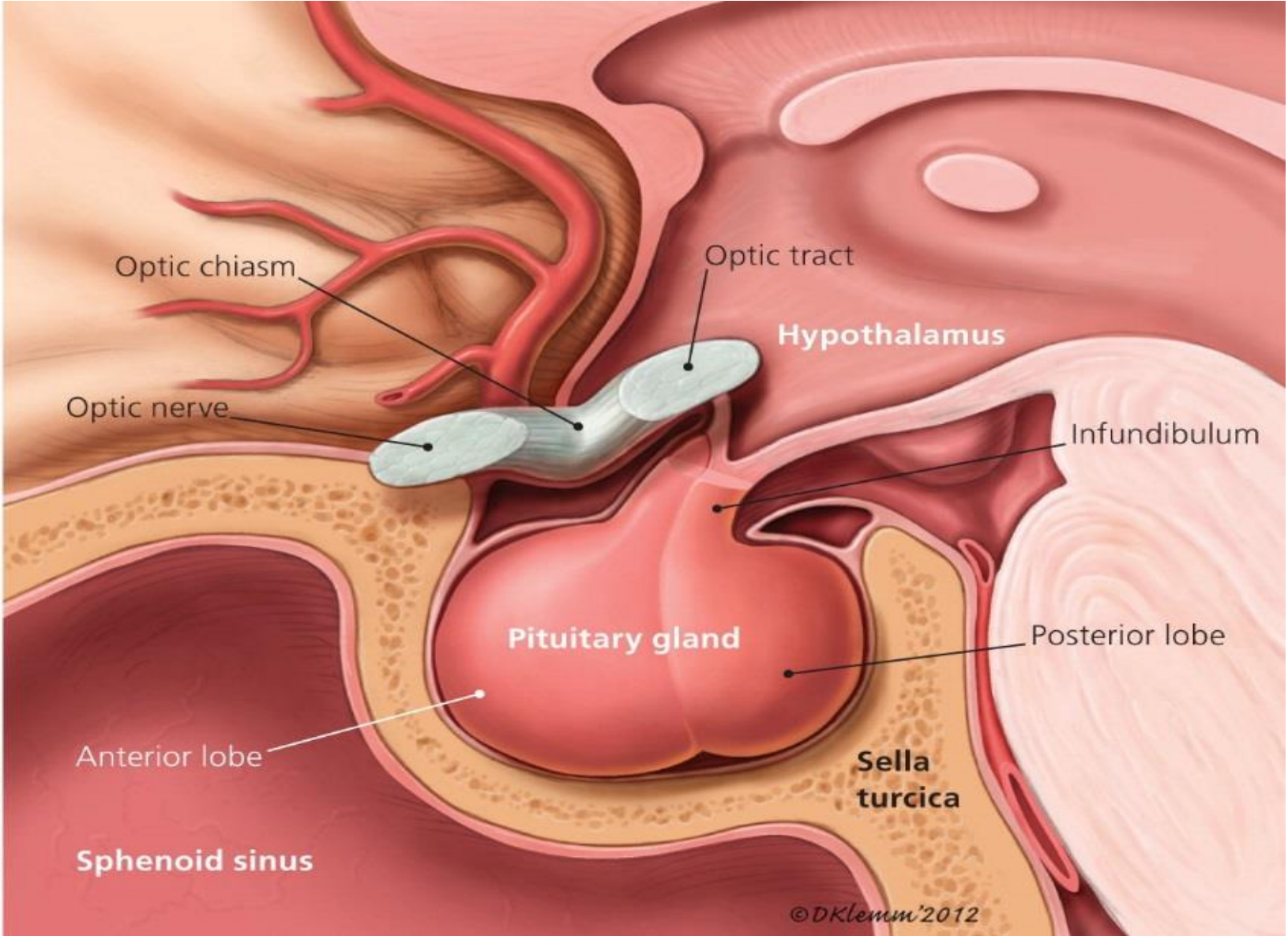
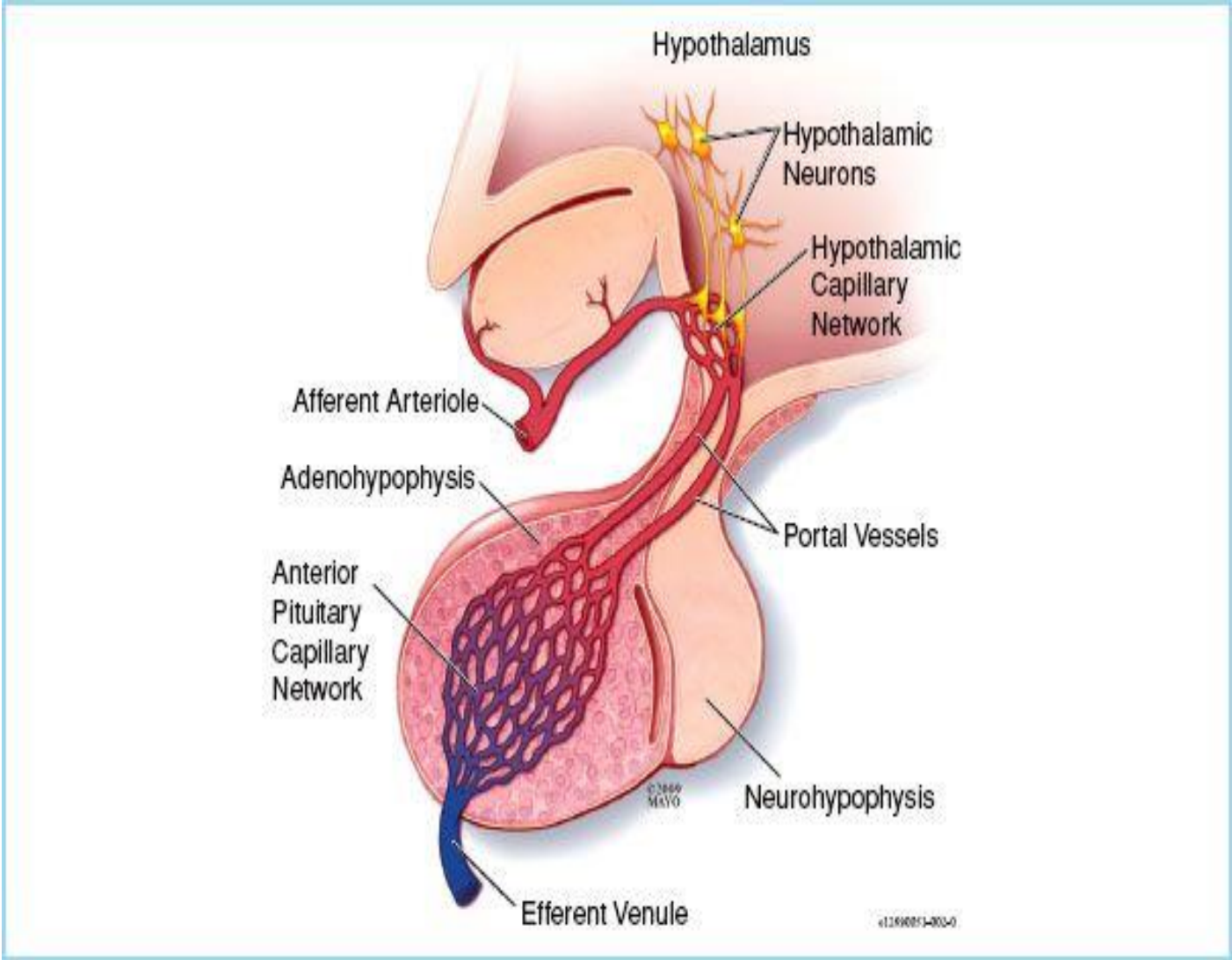
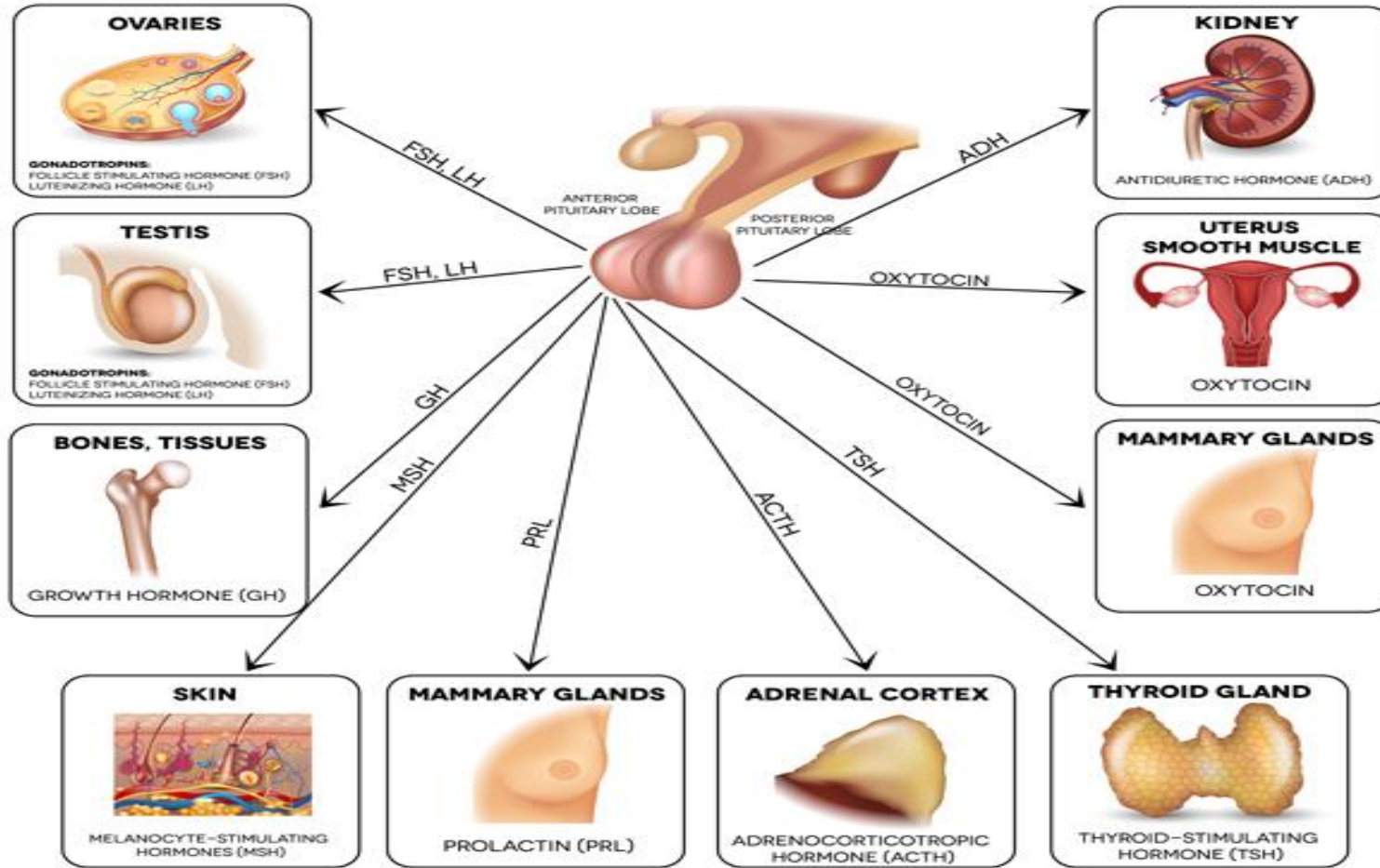


ILLUSTRATION BY DAVID KLEMM

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THE PITUITARY GLAND HORMONES



فیزیولوژی اعصاب و غدد، جلسه یازدهم

غدد تیروئید و فوق کلیوی و هورمون های آنها





فیزیولوژی اعصاب و غدد، جلسه دوازدهم

غدد پاراتیروئید و لوزالمعده و هورمون های آنها





فیزیولوژی اعصاب و غدد، جلسه سیزدهم

غدد جنسی و آثار رفتاری هورمون های آنها