# Neuropharmacology

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# Neuropharmacology Student Activities

Anorexia Nervosa

Hyperactivity Disorder

Obesity

Insomnia

Huntington's Disease

Amyotrophic Lateral Sclerosis

Multiple Sclerosis

Stroke

Autism Spectrum Disorders

Post-Traumatic Stress Disorder

Substance Use Disorders

Migraine

# Neuropharmacology Student Activities

## Topics structure

Introduction

Mechanism/Pathophysiology

Diagnosis, screening and prevention

Pharmacotherapy

Pharmacology treatment in development/new strategies

Conclusion/outlook

# Neuropharmacology Audience Activity

The students from the audience must prepare at least two questions to submit to the speaker

# Neuropharmacology Homework

Two multiple choice questions: only one answer is correct

One open question

In one week time

# Exam

The exam consists of a written test (30 minutes) with 2 open questions

27/01/2020

21/02/2020

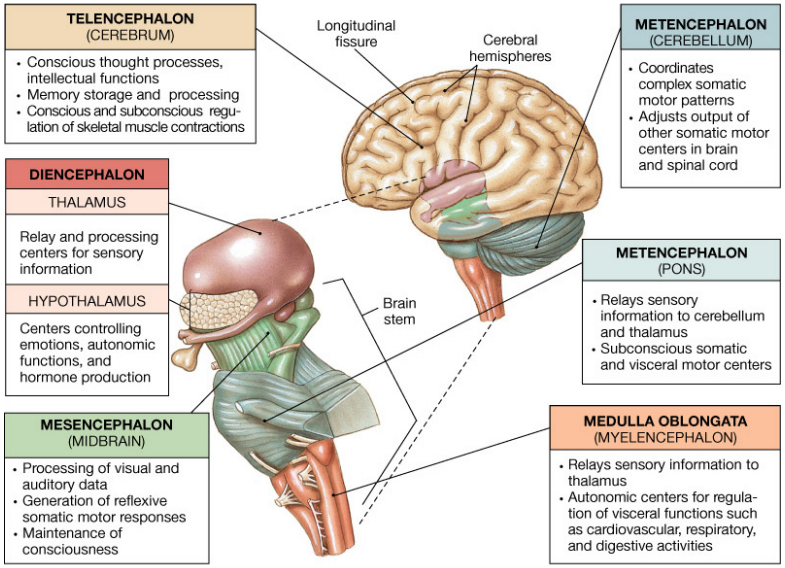
30/06/2020

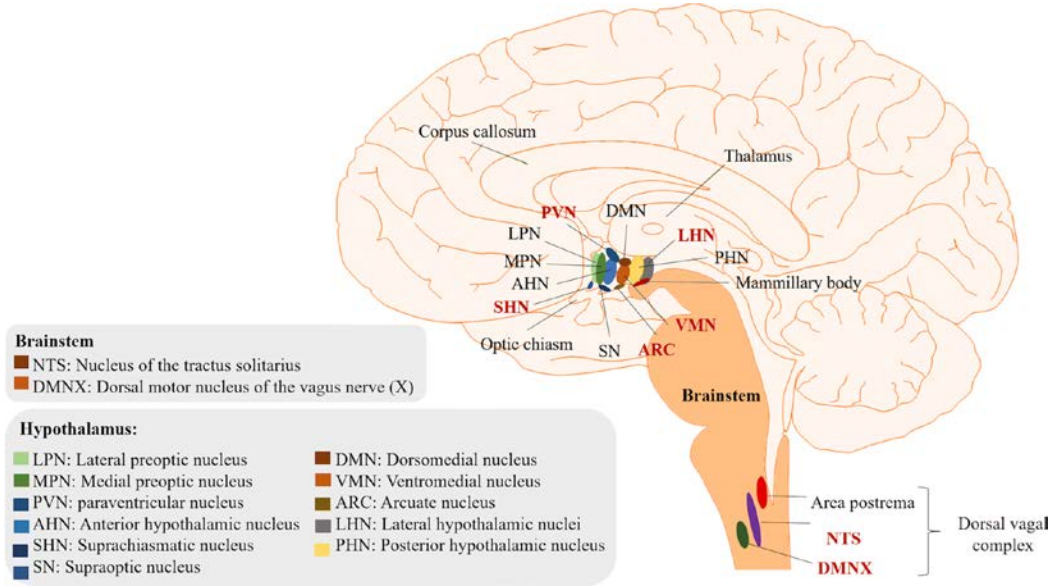
23/07/2020

08/09/2020

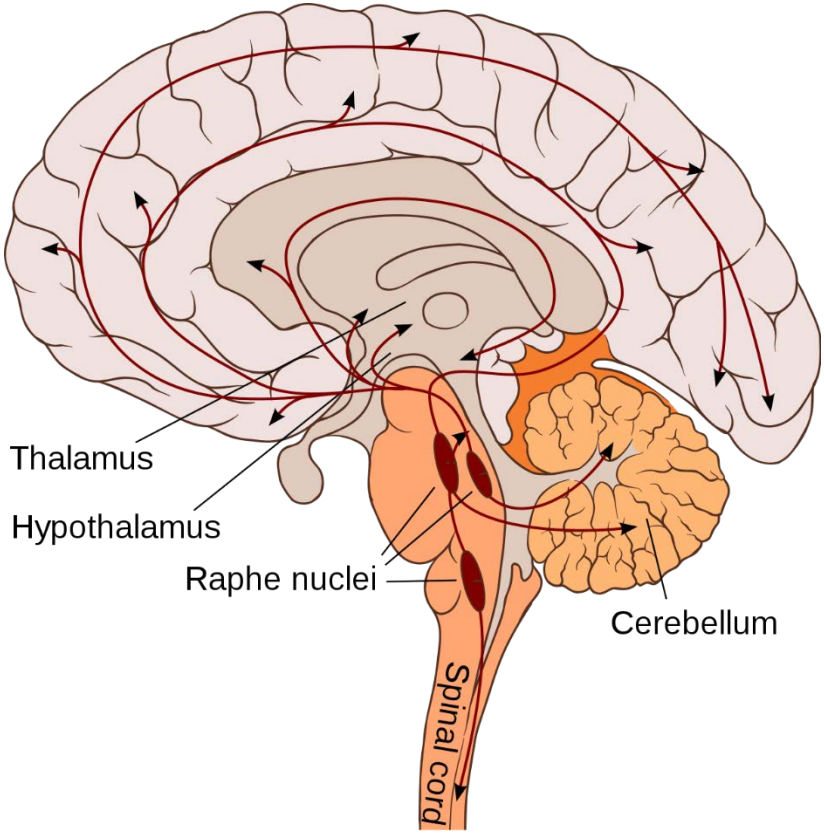
# PHARMACOLOGICAL REGULATION OF SYNAPTIC FUNCTION

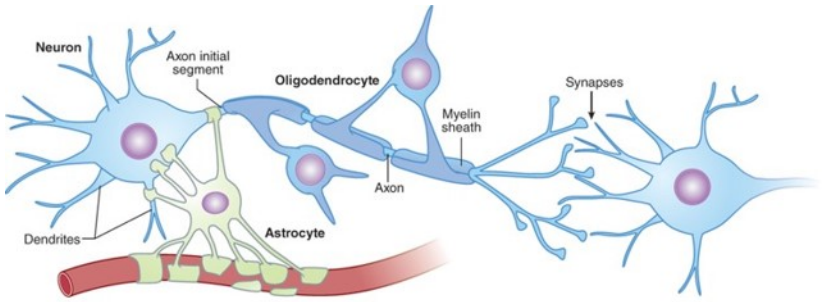
# Organization of the CNS



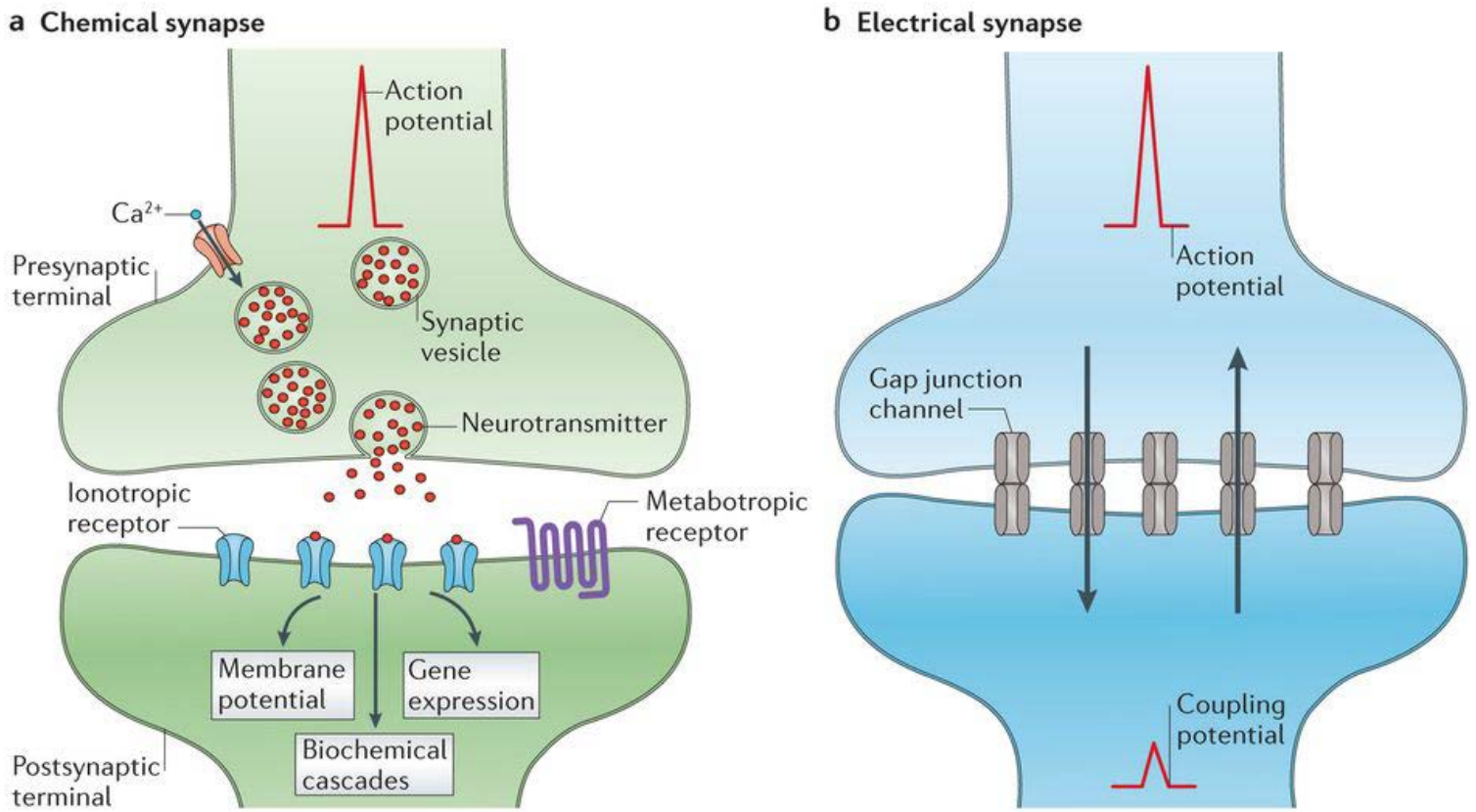



# Organization of the CNS

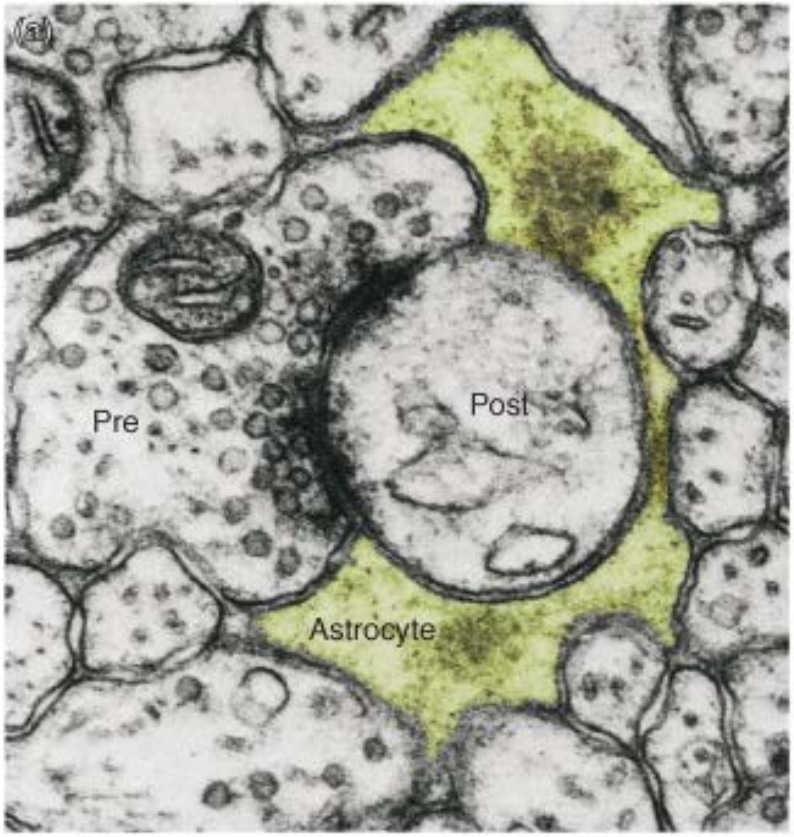


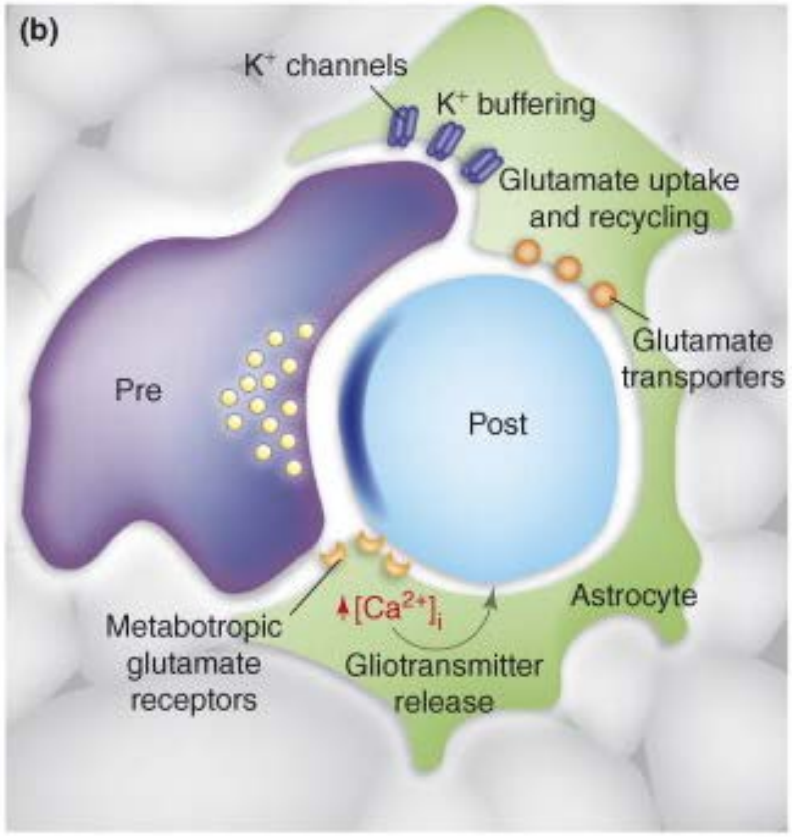



# The Synapse

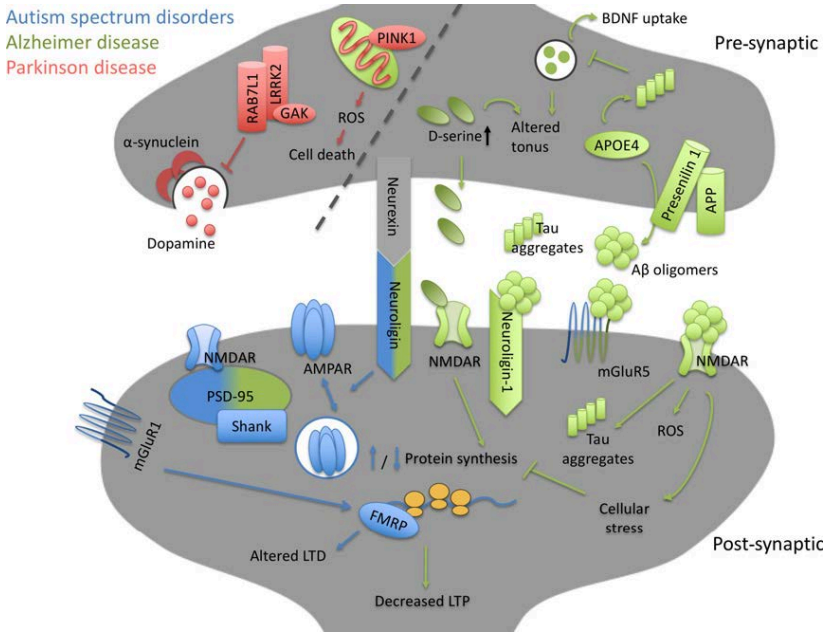

a Chemical synapse
Action potential
Ca2+
Presynaptic terminal
Synaptic vesicle
Neurotransmitter
Ionotropic receptor
Metabotropic receptor
Membrane potential
Gene expression
Biochemical cascades
Postsynaptic terminal
b Electrical synapse
Action potential
Gap junction channel
Coupling potential

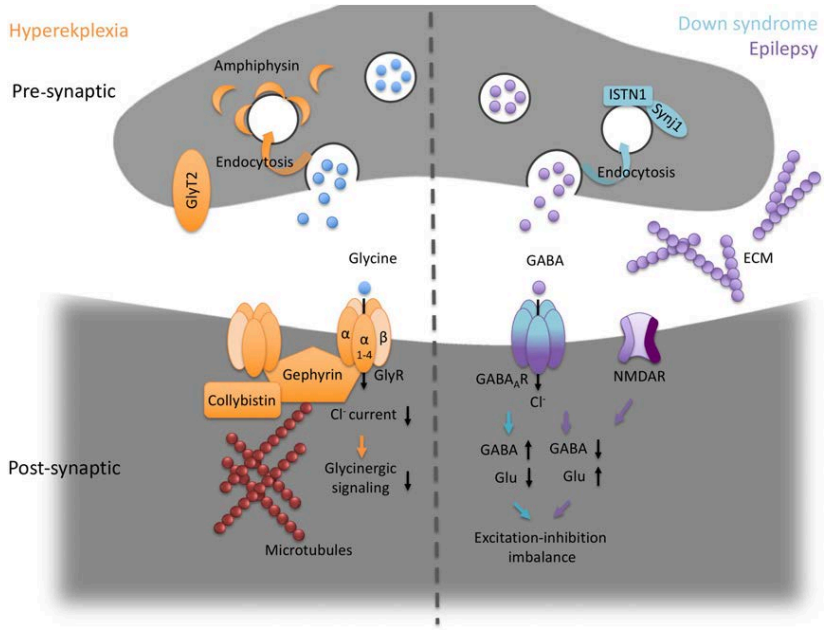
# The Tripartite Synapse



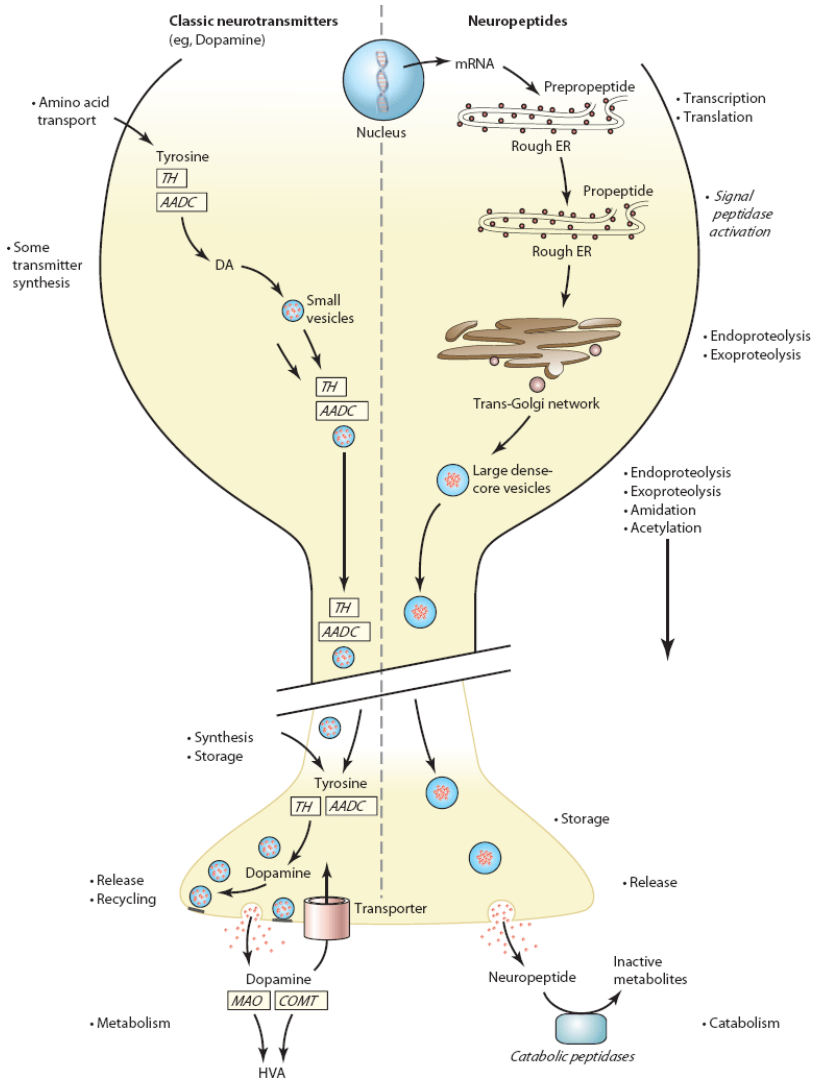



# Synaptopathies

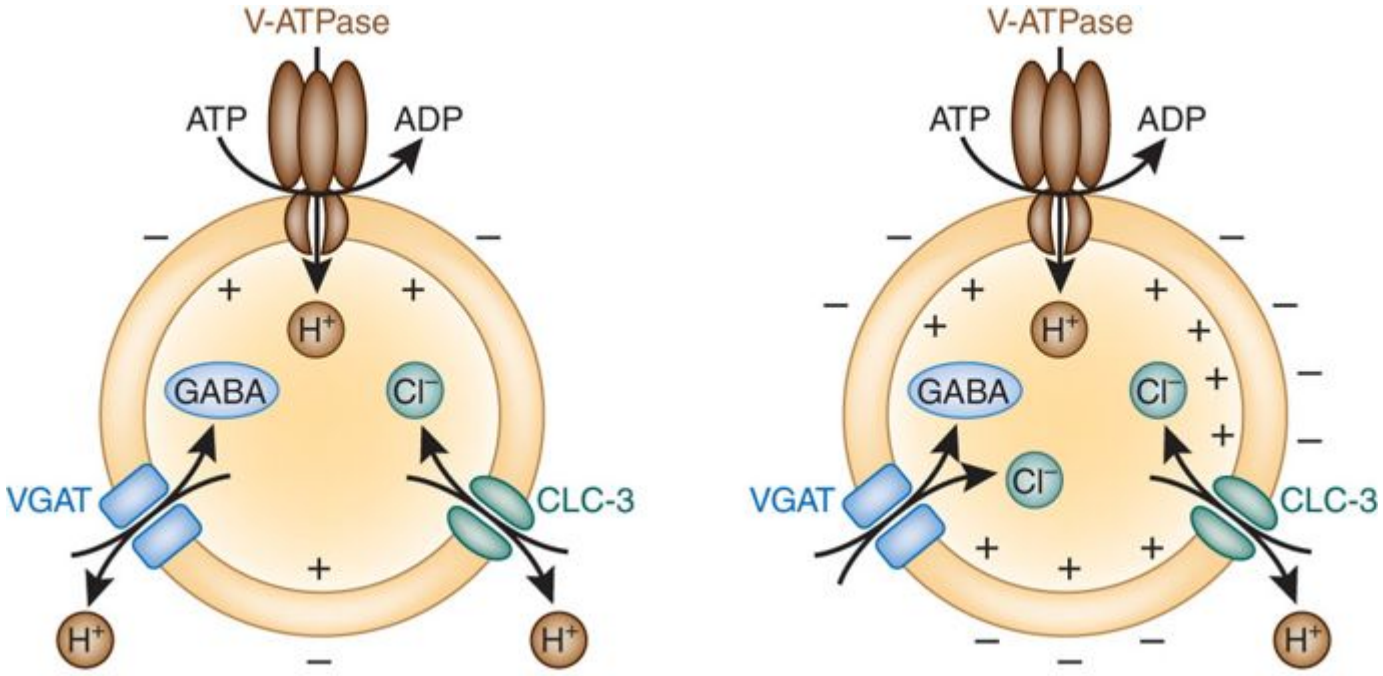


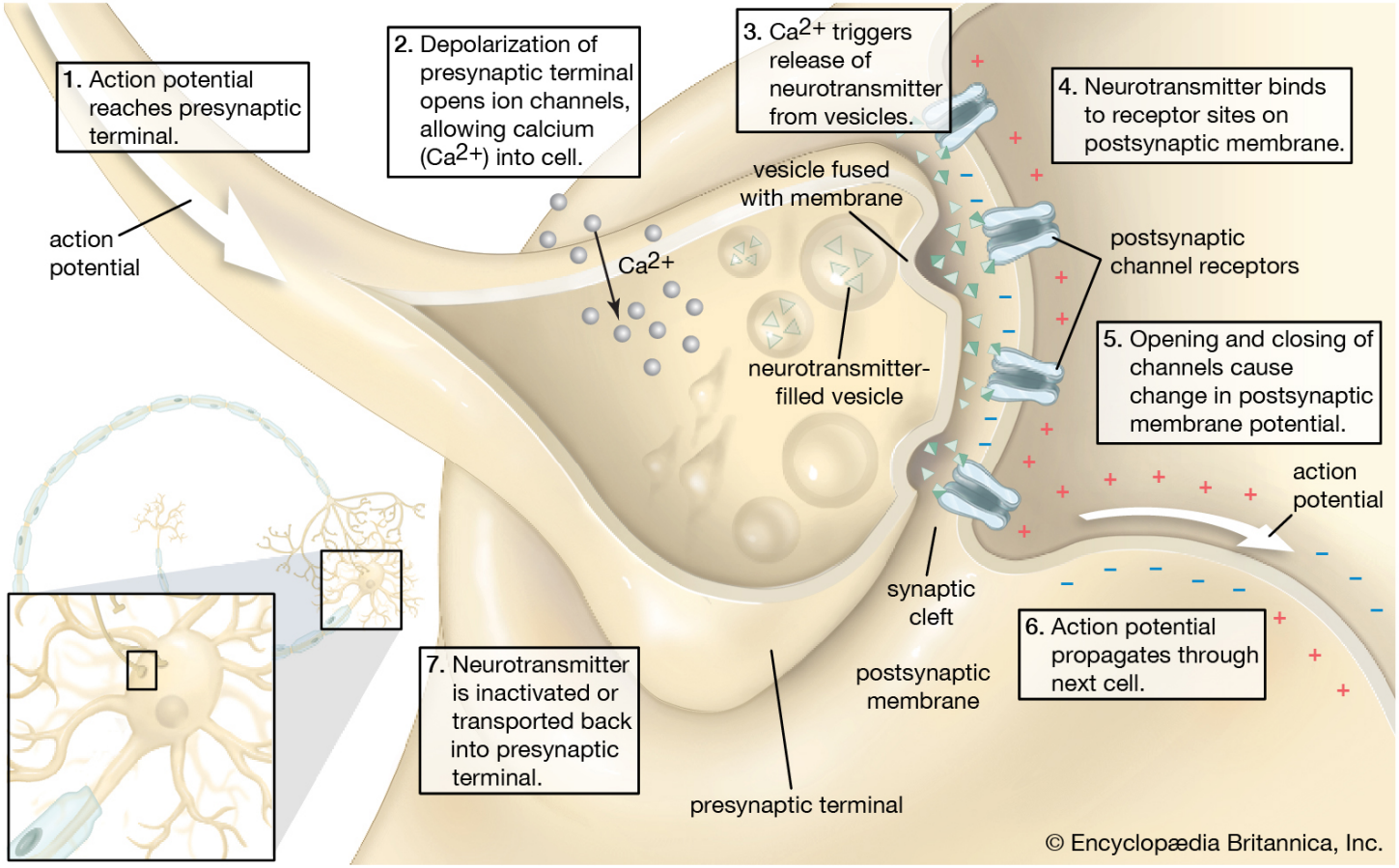
# Chemical Messengers



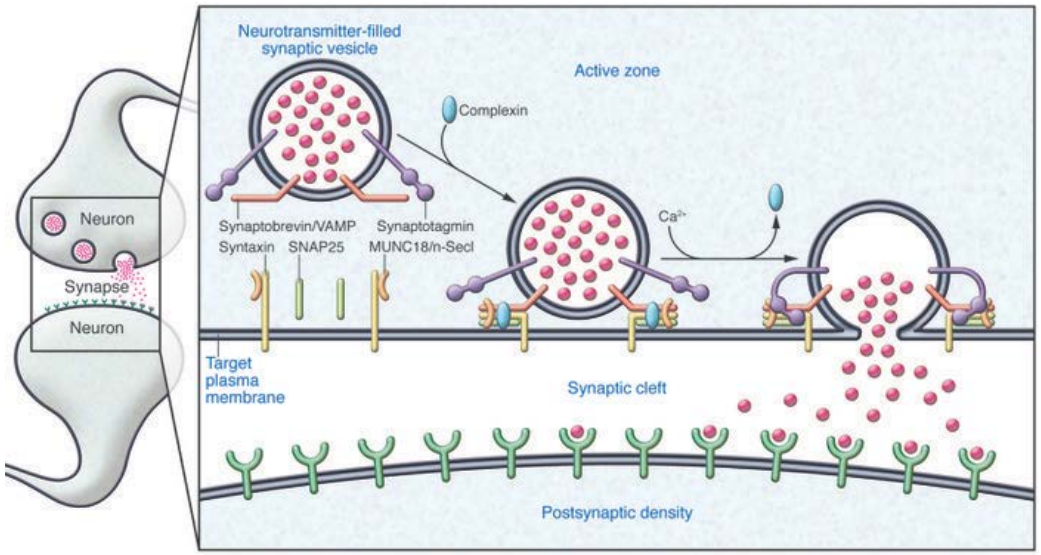
# Neurotransmitter Storage

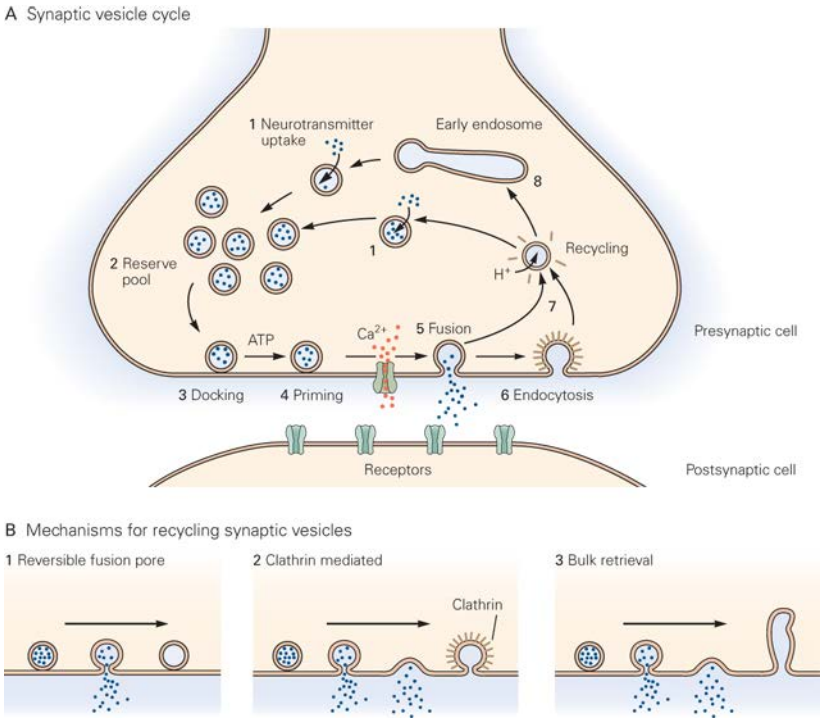


# Neurotransmitter Release

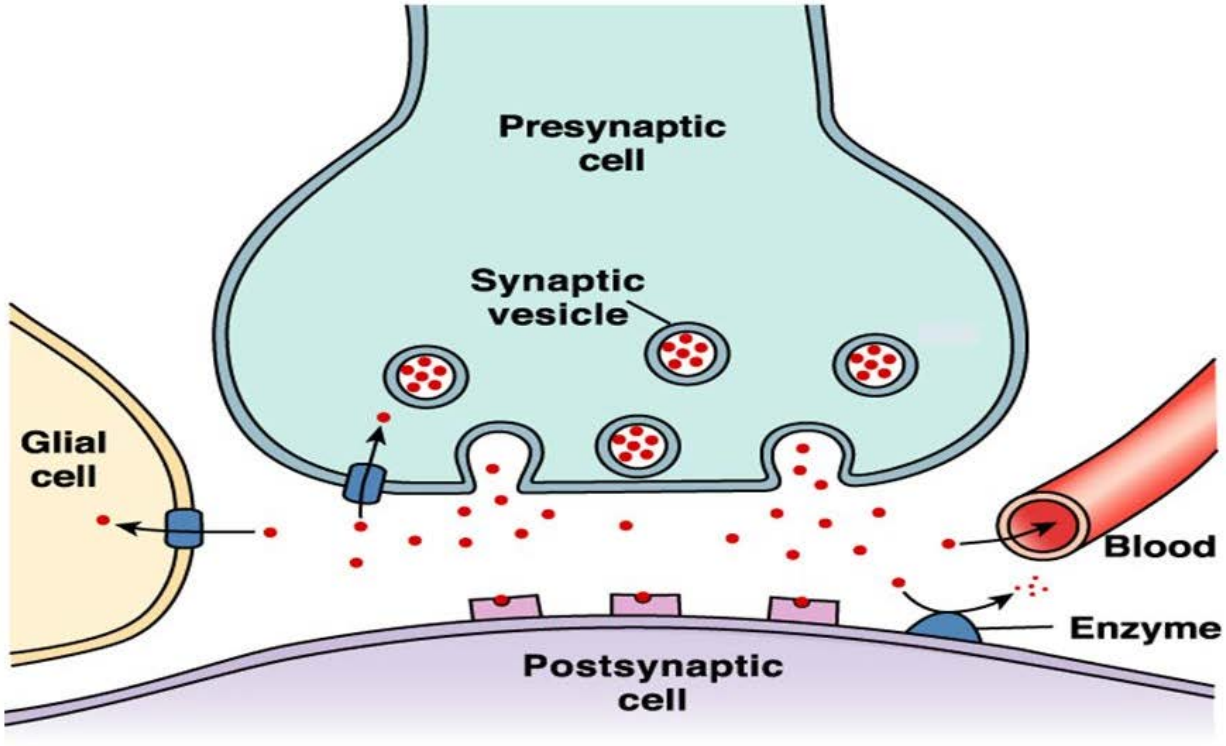


# Neurotransmitter exocytotic and endocytotic process

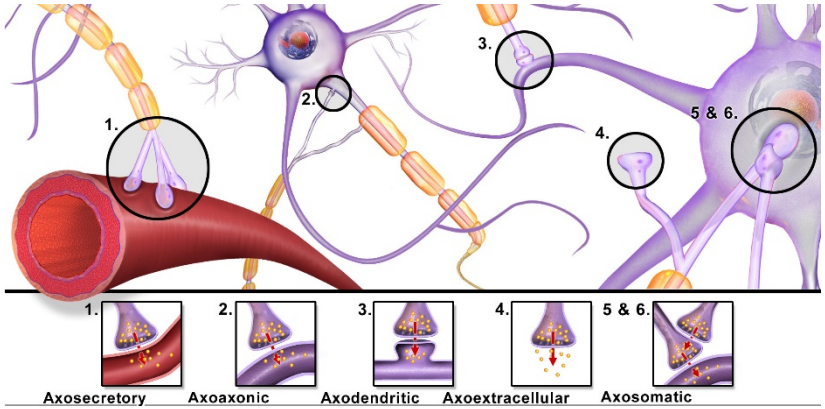


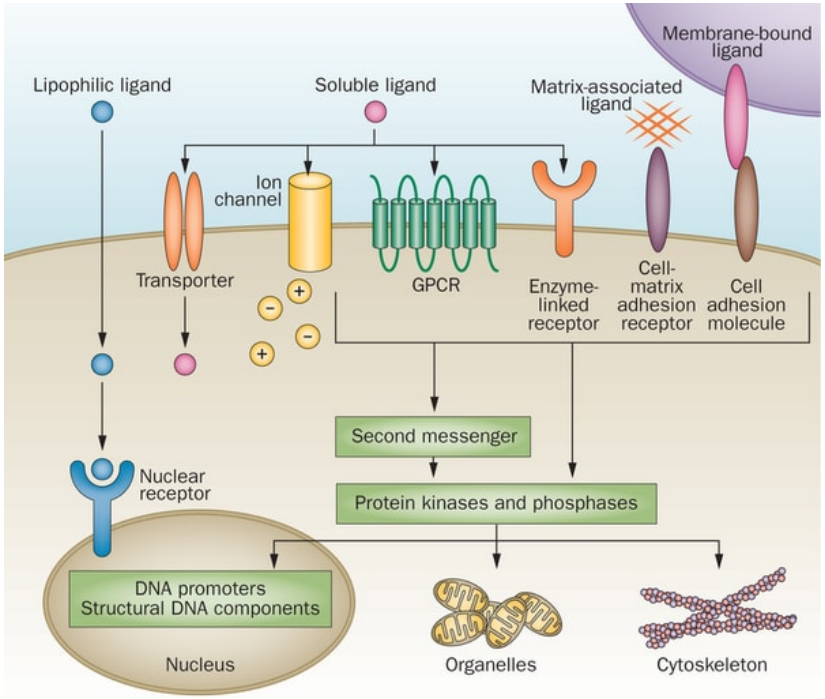



# Neurotrasmitter Fate

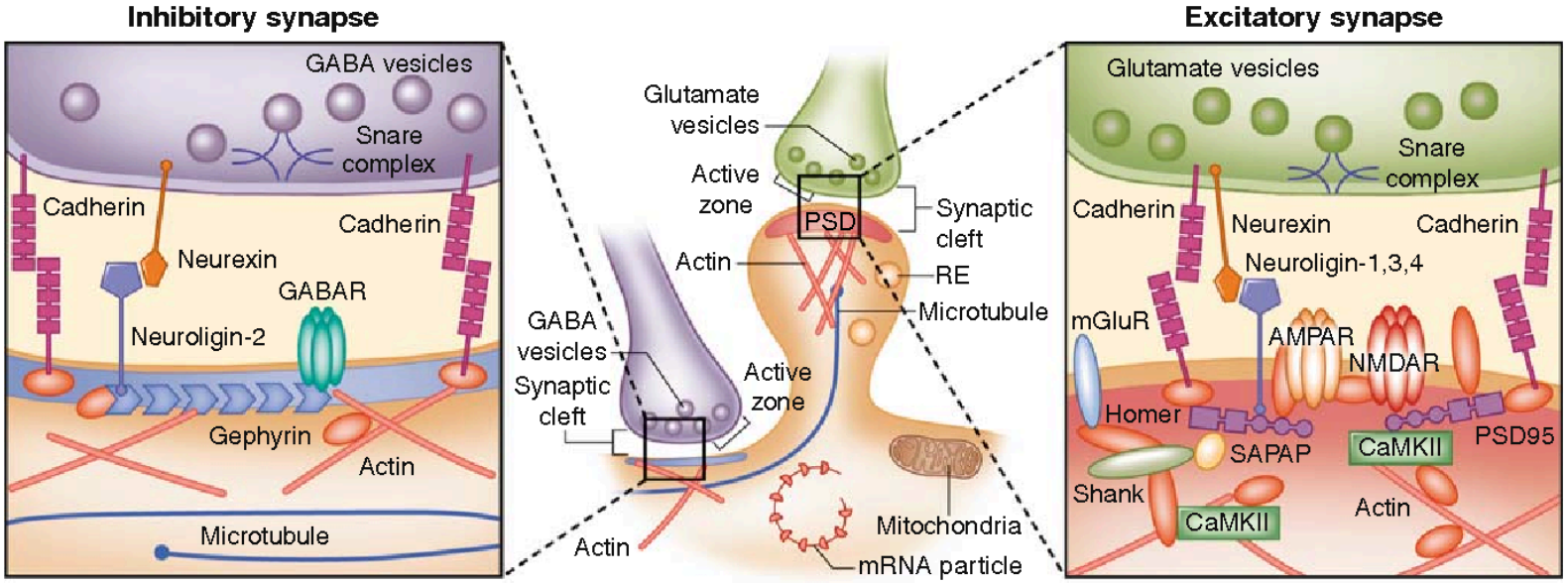


# Postsynaptic Signal Reception

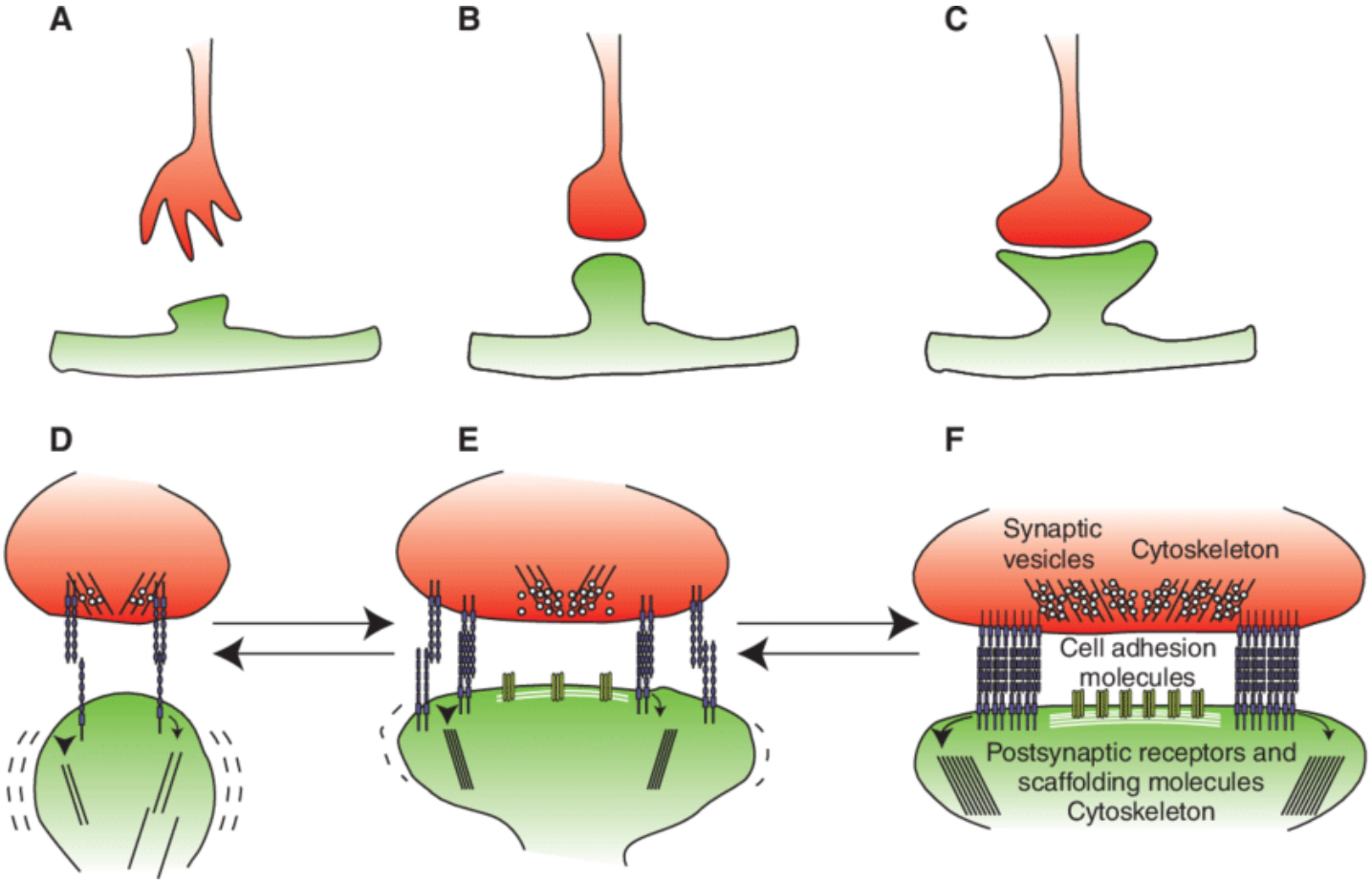


# Inhibitory and Excitatory Synapses



# Synaptogenesis



# Mechanism of Drug Action at Synaptic Level