

Tyrosine → L-Dopa → Dopamine

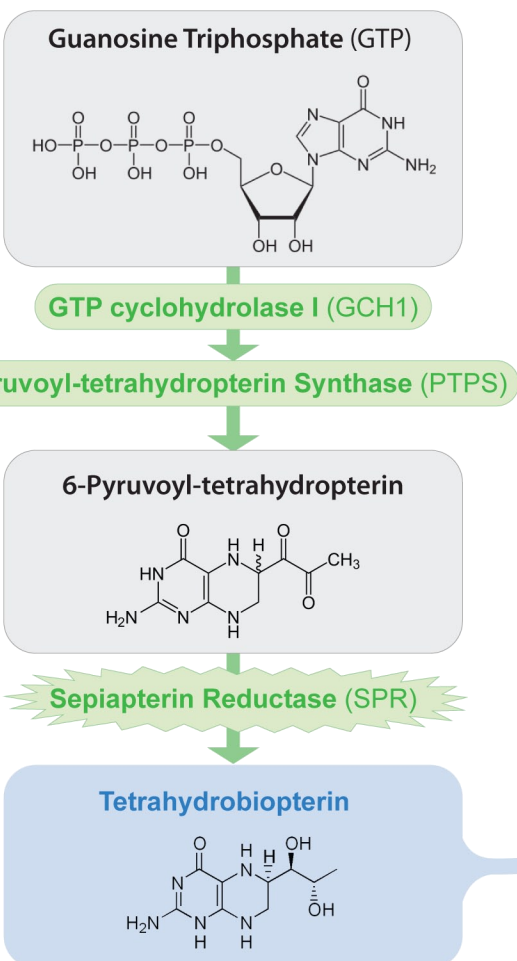
Role of Sepiapterin Reductase in Neurotransmitter Production

Sepiapterin Reductase is the final enzyme in the biosynthetic pathway for **tetrahydrobiopterin** – a cofactor used by other enzymes in the synthesis of the neurotransmitters **dopamine** and **serotonin**.

In the case of **dopamine** biosynthesis, the enzyme **Tyrosine Hydroxylase** uses **tetrahydrobiopterin** to convert tyrosine to L-Dopa. In a second reaction, the enzyme **Aromatic L-amino Acid Decarboxylase** converts L-Dopa into **dopamine**, the active neurotransmitter.

● Enzymes ● Neurotransmitters ● Cofactors

Tetrahydrobiopterin Pathway



Dopamine Pathway

