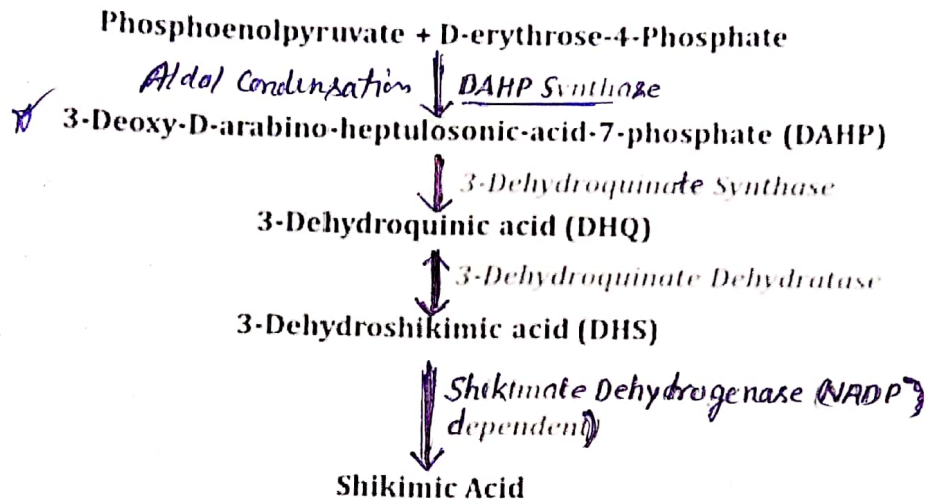


# SHIKMIC ACID PATHWAYS



↓ Shikimate Kinase

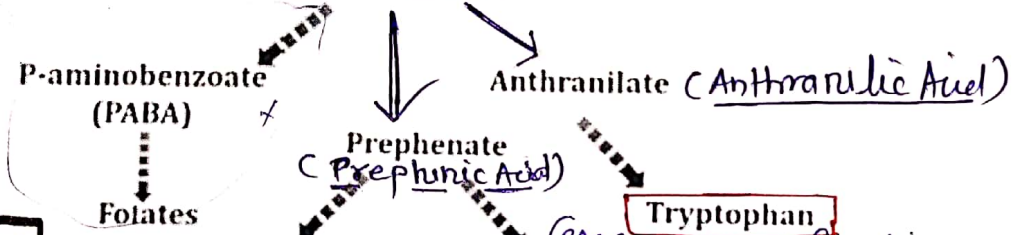
Shikimate-3-Phosphate

↓ EPSP Synthase

5-enolpyruvyl-shikimate 3-Phosphate (EPSP)

↓ Chorismate Synthase

Chorismic acid



- ↓ Foliates

**Phenylalanine**

  - Ephedrine
  - Mescaline
  - 1-Hyoscyamine
- ↓ (PABA)

**Tyrosine**

  - Thubaine
  - Codeine
  - Morphine
  - Emetine
  - Colchicine
- Tryptophan**

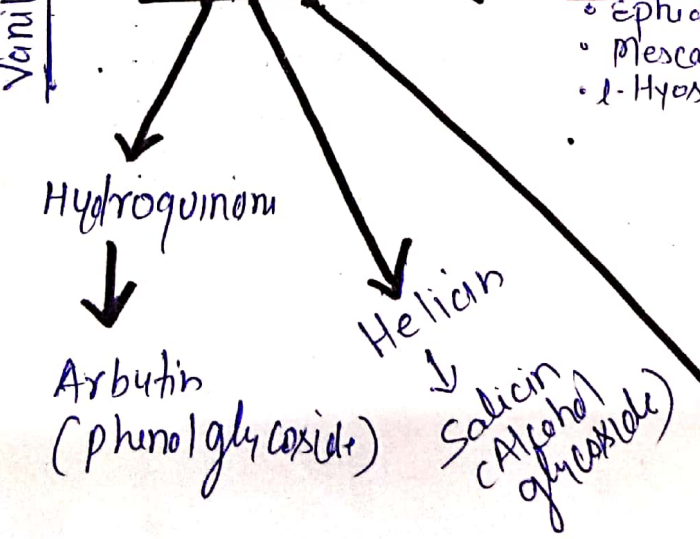
  - Reserpine
  - Ergot alkaloids (Lysergic Acid)
  - Serpentine
  - Strychnine

(Ex. Ammi majus  
A. Viscaga)

Coumarin (lactone)  
glycosides

o-coumaroyl  
glycoside

**Cinnamic Acid**



C15 Intermediate (C6-C3-C6)

↓

Flavonoids

Ex. Cyanidin  
Quercetin