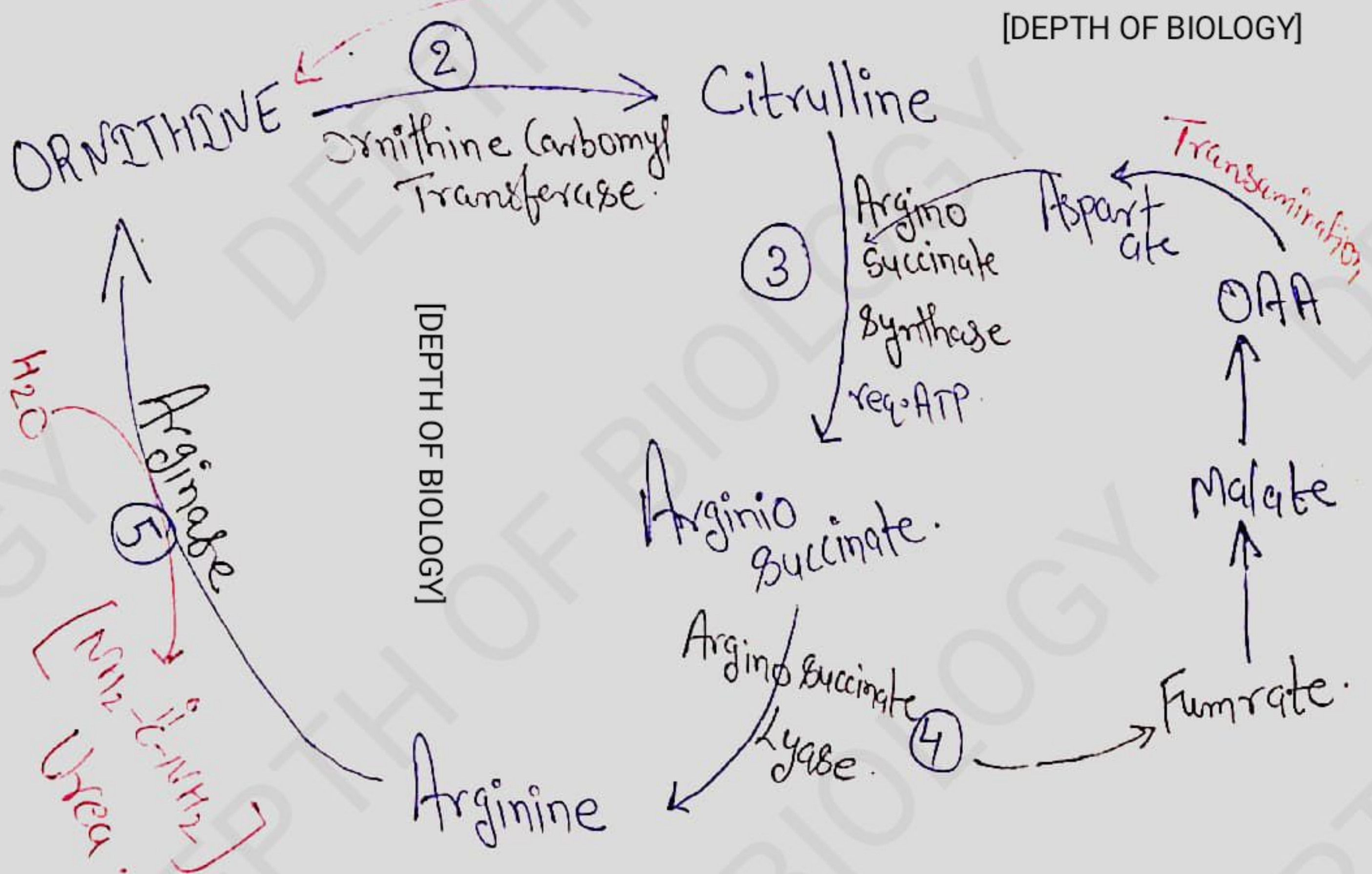
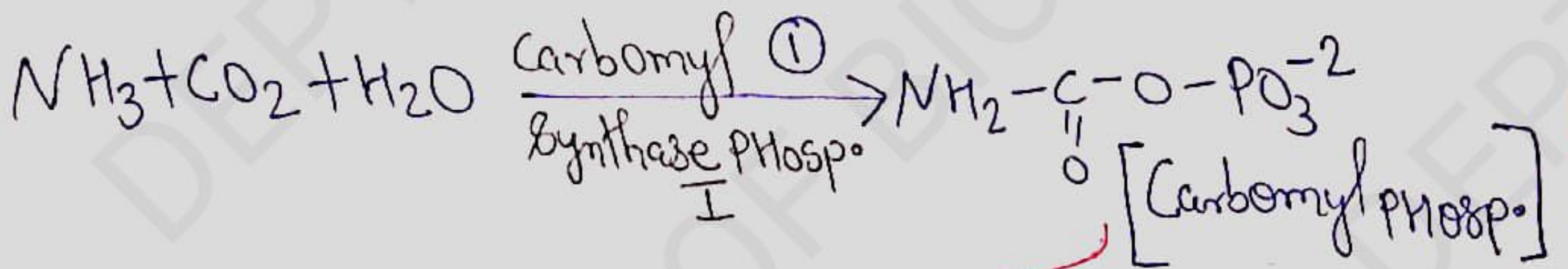


Urea bicycle. / Urea Cycle - / Krebshenseheit Cycle.

ORNITHINE Cycle.



Urea Cycle. takes place in the Liver.

⇒ Urea Cycle is a series of 5 Reaction Catalyzed by Several Keyenzyme.

[DEPTH OF BIOLOGY]

Starting 2 Enzyme (1) in Mitochondrial Matrix.
 & rest (4) in Cytosol.

⇒ So, it is Partly cytoplasmic & Partly Mitochondria.

⇒ Only liver possesses all the enzyme seq. to synthesize Urea from Ammonia. [DEPTH OF BIOLOGY]

Junction of Urea Cycle ⇒

- ① It removes Nitrogen into less toxic form like Urea.
or
convert [DEPTH OF BIOLOGY]
- ② Help to Excrete Harmful Gases.
- ③ Harmful Gases like Ammonia & CO₂.
- ④ Synthesis of semi-essential Amino acid Arginine.
- ⑤ Ornithine is precursor of Proline, Polyamine.
- ⑥ Polyamine like Spermine.

Urea Cycle Disorder. [DEPTH OF BIOLOGY]

Disorder
associate
with every step
of Urea Cycle.

① Hyperammonemia type-I

↓
due to defect in enzyme Carbonyl
Phosphate Synthase-I

② Citrullinemia ⇒ Decrease in the activity of Argininosuccinate Synthase

due to which level of Citrulline ↑. ←

[DEPTH OF BIOLOGY]

③ Hyper-argininemia ⇒ Autosomal recessive disorder due to defect in Arginase.

④ Hyperammonemia type 2 ⇒ X-chromosomal linked disorder reflect deficiency of Ornithine transcarbamylase.