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Discipline: BS Radiology

Viva Assignment: Biochemistry

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Steps Involved in Uric Acid Formation

Introduction:

Uric acid is formed by the breakdown of purine nucleotide.

Purine Nucleotides:

Purine nucleotides are adenosine, guanine and inosine.

Synthesis:

Uric acid is synthesized mainly in the liver, intestines and other tissues such as muscles, kidneys and the vascular endothelium as the end product of an exogenous pool of purines, derived largely from animal proteins.

- In addition, liver and dying cells degrade their nucleic acids, adenine and guanine into uric acid.**

Process:

Deamination and Dephosphorylation:

Deamination and dephosphorylation convert adenine and guanine to inosine and guanosine, respectively.

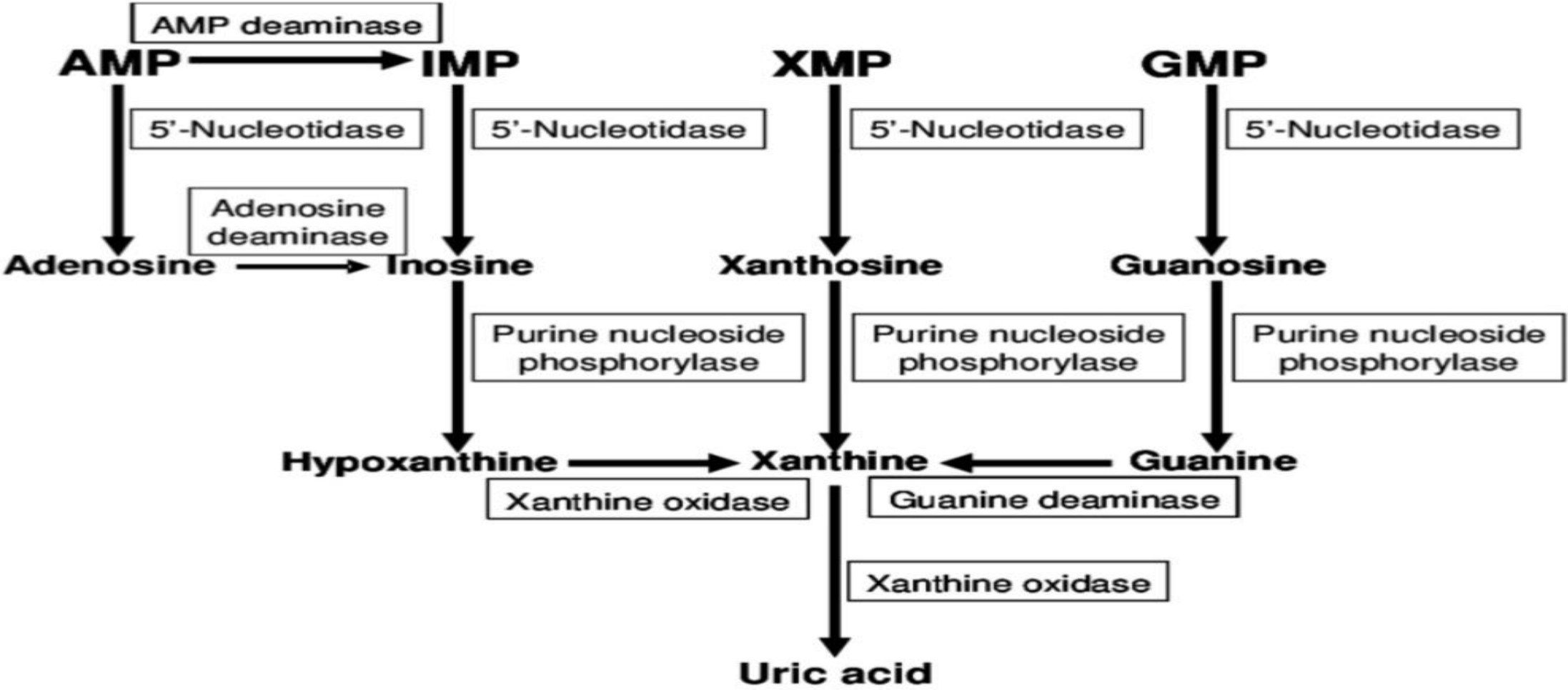
Role Of Enzyme:

The enzyme purine nucleoside phosphorylase converts inosine and guanosine to the purine bases, respectively hypoxanthine and guanine, which are both converted to xanthine via xanthine oxidase-oxidation of hypoxanthine and deamination of guanine by guanine deaminase.

Oxidation Of Xanthine:

Xanthine is further oxidized by xanthine oxidase to uric acid .

Diagrammatic Representation:



Thank You