

Coenzyme Questions 8th Lecture

1. How does a Flavin cofactor react with squalene to start the cyclization to lanosterol?
2. Draw the conformation of squalene that allows the cyclization!

Coenzyme Questions 9th Lecture

3. What reaction do the Statin-pharmaceuticals inhibit?
4. How does IPP react to give geranyldiphosphat?

Coenzyme Questions 10th Lecture

5. Describe the first steps of the terpenoid biosynthesis to Mevalonate!
6. How is Mevalonate converted to IPP?

Coenzyme Questions 11th Lecture

7. Describe the chemistry of the catalytic triade. What is the function of Lipases?
8. Describe the first steps of the fatty acid biosynthesis to Acetoacetyl – ACP!
9. How is Acetoacetyl – ACP converted to a fully saturated compound during fatty acid biosynthesis?

Coenzyme Questions 12th Lecture

10. During the pentose phosphate pathway CO₂ and NADPH are produced from glucose already quite at the beginning of the process. Please report the chemistry that converts glucose to ribulose!

Coenzyme Questions 13th Lecture

11. What is the name of the enzyme that allows plants to fix CO₂? Describe the chemistry!
12. What is the starting material for the pentose phosphate pathway and what are the main sugar intermediates that are accessible?
13. Describe the reaction of the TPP-cofactor with Xylulose-5-phosphate and the reaction of theintermediate with ribose-5-phosphate!