

## 84284 Signaling Pathways in Health and Disease 14 CFU

### **Exam Questions**

Academic Year 2020/2021

### **Exam method**

Students who regularly attended the course of Cell Signaling will be evaluated through a **four-hour FINAL EXAM**, a cumulative **written test** with both **multiple-choice and open-ended** response formats that include topics from all the teaching modules of the integrated course of Signaling Pathways in Health and Disease.

Final Grade Fractions:

- Cell Signaling 9/32 pts;
- Metabolic Biochemistry 14/32 pts;
- Physiology 9/32 pts.

→ MAX GRADE: 30 cum laude.

The final exam for the module of Physiology will be an open-ended question written test.

## **84285 Cell Signaling 4 CFU**

*Maria Luisa Genova*

### Exam Questions

- July 2020 A1: thyroglobulin role, cAMP, DAG and IP3, Steroid hormones, G proteins

A2: insulin signaling pathway, find the errors and describe the mechanism.

A3: fill the test about JAK-STAT

## **76149 Physiology 4 CFU**

*Davide Martelli*

### Exam Questions

- Ca & Pi regulation
- Hypercalcemia
- Hypocalcemia
- Parathyroid gland
- Parathyroid hormone
- Physiology of bone
- Calcitonin

- Vitamin D
- Steroid hormones

Question 2:

- Osmosis
- Cell volume regulation
- Fluid distribution in the body
- Tonicity
- Gibbs donnan effect

**84286 - Metabolic Biochemistry 6 CFU**

*Giorgio Lenaz*

Exam Questions

Open: From alanine to palmitate biosynthesis. ATP balance. The number of alanine required.

He gave a list of enzymes asking the coenzyme and the vitamin (Vit 1/2/3/6/7/9)

Pyruvate DH

Transketolase

Transaldolase

Isocitrate DH

23/7/2021

**76149 Physiology 4 CFU**

*Davide Martelli*

Q1

- Membrane potential

**84285 Cell Signaling 4 CFU**

*Maria Luisa Genova*

**84286 - Metabolic Biochemistry 6 CFU**

*Giorgio Lenaz*