Biochemistry

Code: 100938
ECTS Credits: 9

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<td>2500253 Biotechnology</td>
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Use of languages

Principal working language: catalan (cat)
Some groups entirely in English: No
Some groups entirely in Catalan: No
Some groups entirely in Spanish: No

Contact

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Teachers

Xavier Parés Casasampera
Mohammed Moussaoui

Prerequisites

There are not prerequisites to follow the course successfully. Nonetheless it would be desirable if students were familiar with basic knowledge of biology and chemistry.

Much of the literature is in the English language, which is also used in the figures projected in theory classes.

Objectives and Contextualisation

The subject Biochemistry includes a first part that explains the structural and functional characteristics of biomolecules, with a special emphasis on proteins and enzymes. The second part focuses on understanding bioenergetics, biosignaling and the main routes of metabolism. The general objective of this subject is to provide the basis of the biochemistry that are considered necessary for understanding specific subjects of the Degree in Biotechnology.

Specific objectives of the subject:
- To understand the structural characteristics of biological molecules, knowing how to draw conclusions about their stability, their function and their capacity for replication of structures.
- To understand the concepts of enzyme activity and kinetics in the context of biological reactions and their regulation.
- To describe the general mechanisms through which living organisms obtain and transform the energy of the environment.
- To know the main molecular mechanisms of biosignaling.
- To describe the main routes of intermediate metabolism of glucose, lipids and nitrogen compounds, their regulation and coordination.
- To know how to apply the knowledge to solve qualitative and quantitative problems.

Content


Lesson 20: Metabolism Integration: Coordination of metabolism between liver, muscle, adipose tissue and brain. Main control hormones. Stress and metabolism adaptation.