

918SM - BIOCHIMICA CELLULARE

Prof. Alessandro Tossi

Dept. Of Life Sciences- building Q - via L. Giorgieri 5 Tel. 040-5588705

atossi@units.it

❶ Research activities: <https://dsv.units.it/it/ricerca/ambiti/biomedicina?q=it/node/18699>

② Course programme (6 cfu = 48 hrs)

- A1 - Nucleotide Metabolism
- A2 - Lipid Metabolism and Transport
- A3 - Secretory Pathways
- A4 - Vesicular Trafficking
- A5 - Biochemistry and Drug Discovery
- 3/4 seminars by prof. Renato Gennaro on related metabolic diseases
- Lectures are in Italian, but all PowerPoint slides are in English
- TEAM access key:

② Course timetable

	mon	tue	wed	thu	fri
09:00					
10:00					
11:00					
12:00					
13:00		Aula 1B			
14:00		(Ed. D)			Aula 2B (Ed. H3)
15:00					
16:00		Seminars→	Aula 3A (H3)		
17:00					
18:00					
19:00					

③ Teaching material

- Lecture powerpoint slides converted to pdf available on Moodle (<https://moodle2.units.it/course/view.php?id=116805>)
first access key: «Proteina»
- Lecture recordings deposited on the course Team page
- Your notes (can be written directly on slide pdfs in Moodle)
- Text books (described in Moodle)
- Other teaching material deposited in Moodle

Text books

- See Moodle page (<https://moodle2.units.it/mod/page/view.php?id=447465>)
 - **Any recent biochemistry text** (e.g. Stryer VIII ed. Lehninger VI ed., Devlin 5.ed, any edition from past 10-15 yrs)
 - **Suggested Molecular Biology text:**
 - Lodish - Molecular Cell Biology**, VII - IX editions, W.H. Freeman and Company, New York 2013,2016,2021
 - Lodish - Biologia molecolare della cellula** IV ed. Italiana condotta su IX ed. americana)
 - **Molecular biology of the cell**, Alberts et al., VI or VII edition
 - Original articles loaded onto Moodle

④ Exam format

- The examination is **held in the classroom**, but it is **typed on the student's own laptop/Tablet on the Moodle platform**. Answers can be in either **Italian or English**.
- **Students must bring a laptop or a tablet with a keyboard**. Those who do not have access to such a device may request a laptop from the building's reception (portineria), and should inform me in advance by email.
- The **examination consists of five questions requiring written answers**, one for each course module.
- The **examination lasts 2.5 hours**, and each question should require 30 min. (and is worth 6 points)
- Once all exams are graded, the results are published on Esse3, and the **marked assessments are made available to the students on the Moodle platform**.
- The final grade is the sum of scores obtained for each question and both in Esse3 and Moodle. Pass is 18/30. **Students may choose whether to accept the grade or withdraw** (via Esse3) within a few days of publication. After that period, grades will be officially recorded in Esse3 according to the **tacit consent principle**.

⑤ Using Teams and Lesson Recording

Classes are held in the classroom; Remote participation on **Teams** is permitted only in special circumstances, and permission must be requested from the lecturer.

- 1) All lectures will be recorded (**Remind** the lecturer to start and end recordings !!!)
- 2) Recordings will be suspended if student numbers in the classroom fall below 70% of the year's enrollment for consecutive class days. Recordings will be reinstated when attendance returns to acceptable levels.
- 3) The instructor reserves the right to limit recordings to two weeks online.

⑥ Remote communication with the Lecturer, Coordinator, and Academic Secretariat is **EXCLUSIVELY** via institutional email

In the subject line, please include: GF – SURNAME NAME – motivation of email

Conventions used in the lesson slides

- **Abbreviations and acronyms** for enzymes and biomolecules refer to the English name:

e.g. <u>p</u> hospho <u>f</u> ructo <u>k</u> inase	→ PFK
<u>f</u> ructose- <u>6</u> - <u>p</u> hosphate	→ F-6-P
<u>t</u> ri <u>a</u> cy <u>l</u> g <u>l</u> iceride	→ TAG
fatty acid	→ FA

- **Colour codes**

- **Metabolic intermediates and coenzymes are typically in black**

eg.: Glucose → **Gluc**, **ATP, NADH** Xilulose-5-phosphate → **X-5-P**

- **Non enzymatic proteins are in magenta**

eg.: hemoglobin → **Hb** G-protein activating protein → **GAP**

- **All enzymes are in light blue italics**

eg.: *Pyruvate kinase (PK); Protein kinase A (PKA); G-protein; DNA polimerase III*