Cellular and Molecular Biology/Cell Biology

Lectures:

❖ 1st part:

Professor Biljana Balen

Department of Molecular Biology Horvatovac 102a small building, 2nd floor, room 203 e-mail: bbalen@zg.biol.pmf.hr

❖ 2nd part:

Professor Višnja Besendorfer

Department of Molecular Biology Horvatovac 102a small building, 2nd floor, room 203

e-mail: vbesend@zg.biol.pmf.hr

Practicum:

❖ Petra Cvjetko, PhD

Department of Molecular Biology Horvatovac 102a small building, 2nd floor, room 222 e-mail: pcvjetko@zg.biol.pmf.hr

Practicum ZMB 1 Horvatovac 102a small building, 1st floor

- Cell Biology I methods, cellular organization, organelles of the eukaryotic cell
- Cell Biology II nucleus (cell cycle, meiosis, C – mitosis)
- Molecular Biology –DNA molecule, transcription, mRNA, translation

Lectures

- Contents of Cell Biology I:
- Methods
- Origin and Organization of the Cell
- Biomembranes
- Plastids
- Mitochondrion
- Endoplasmic reticulum
- Golgi Complex
- Lysosomes
- Cytoskeleton

❖ Practicum

- ≥3 hours per week
- **>**obligatory!!!
- <u> ► materials for practicum</u>:
- Skripta za studente biologije "PRAKTIKUM IZ STANIČNE I MOLEKULARNE BIOLOGIJE"
- Obrasci uz skripta
- Lab coat
- Lab accessory

Obligatory for each practicum!!!

Skripta i obrasci na web stranici BO (http://www.pmf.unizg.hr/biol)

entrance exam!!!

- absence form the practicum max. 2 X!
- ➤ it is possible to switch the day of the practicum to catch up but it is necessary to contact assistant by e-mail!
- Students collect points from the each exercise and the final number of points contributes to their final grade

- Partial exam
- 2 partial exams:
- 1. After Cell Biology I Lectures
- 2. After Cell Biology II and Molecular Biology Lectures

Grading and exams

Score (%)	Grade
60-69	2 (enough)
70-79	3 (good)
80-89	4 (very good)
90-100	5 (excellent)

Elements according to which the students are evaluated are:

- 1. Exam (partial or final)
- 2. Practicum

Students who achieve at least 80% at partial exams do not have to attend the final exam.

Final exam – written part + oral part

How is the final grade calculated?

- (E) Exam (either sum of partial exams or final exam): score (%) x 0,7
- (P) Practicum: score (%) x 0,3

Total score = $E + P \rightarrow$ oral exam

Important – the **E** score has to be at least 60%

Examples:

Student 1

partial exams **E1** 78/95; **E2** 88/100 \rightarrow 166:195 = 87% \rightarrow 85 x 0,7 = **59,5** practicum **P** - 91 % \rightarrow 91 x 0,3 = **27,3** student does not have to go to final exam – partial exams > 80% Total score: **59,5** + **27,3** = **86,8** \rightarrow oral exam

Student 2

partial exams E1 68/95; E2 72/100 \rightarrow 140:195 = 72% \rightarrow 72 x 0,7 = 50,4 practicum P - 88 % \rightarrow 88 x 0,3 = 26,4 student has to go to final exam – partial exams < 80% final exam score:78% Total score: 54,6 + 26,4 = 81 \rightarrow oral exam

Literature:

• 1. Molecular Biology of the Cell. 5th ed.

Alberts, Bruce i sur.

New York: <u>Garland Publishing</u>; 2008. – book available in the library of the Division of Molecular Biology

2. Molecular Biology of the Cell. 4th ed.

Alberts, Bruce i sur.

New York: <u>Garland Publishing</u>; 2002. – book available in the library of the Division of Molecular Biology and NCBI web page

3. Molecular Cell Biology. 4th ed.

Lodish, Harvey i sur.

New York: W. H. Freeman & Co.; 2000. – book available in the library of the Division of Molecular Biology

4. The Cell - A Molecular Approach. 2nd ed.

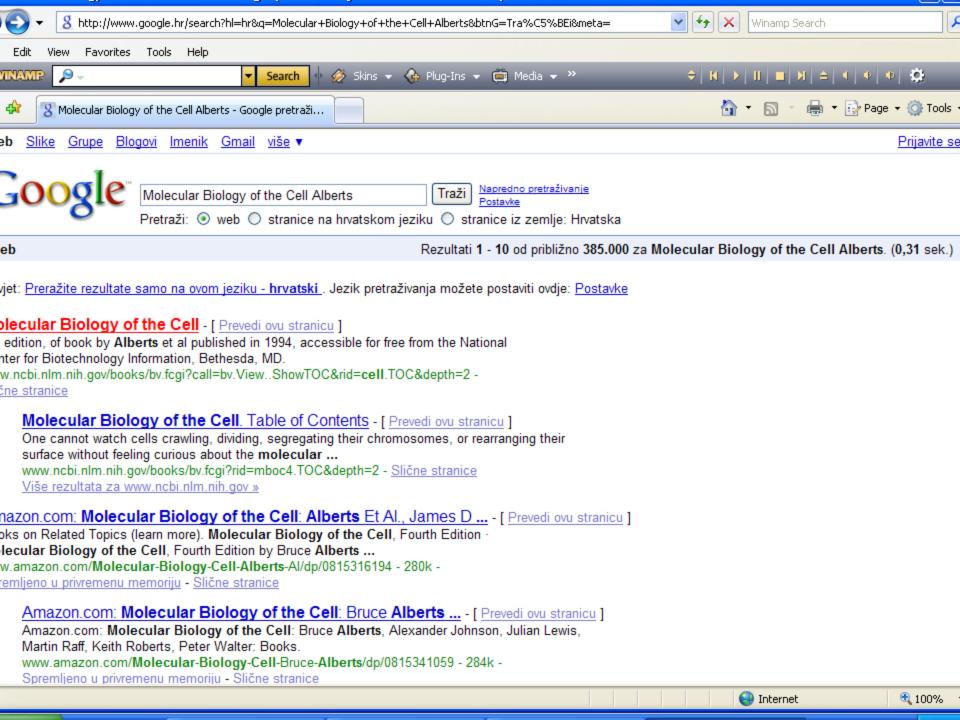
Cooper, Geoffrey M.

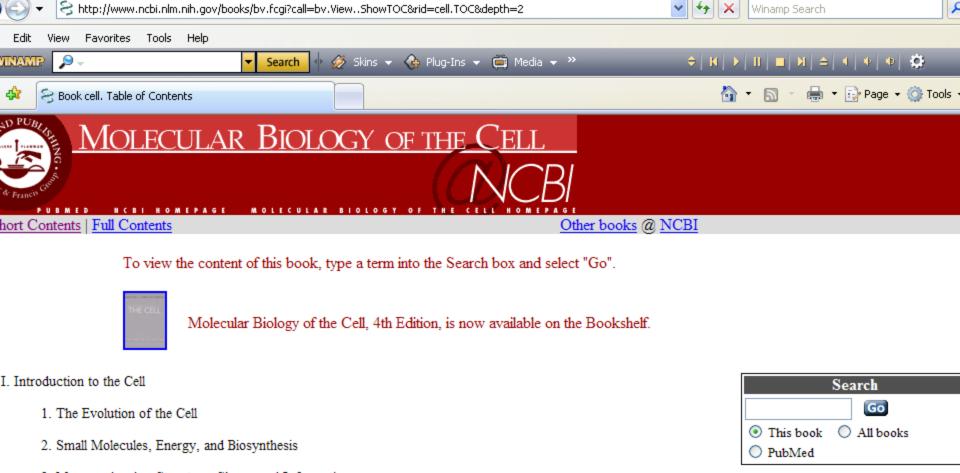
Sunderland (MA): <u>Sinauer Associates</u>, <u>Inc</u>; 2000. – book available at the library of the Division of Molecular Biology and NCBI web page

• 5. Stanica, molekularni pristup

Cooper, Geoffrey M - hrvatsko izdanje

Zagreb: Medicinska naklada; 2004 – knjiga dostupna u biblioteci ZMB





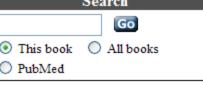


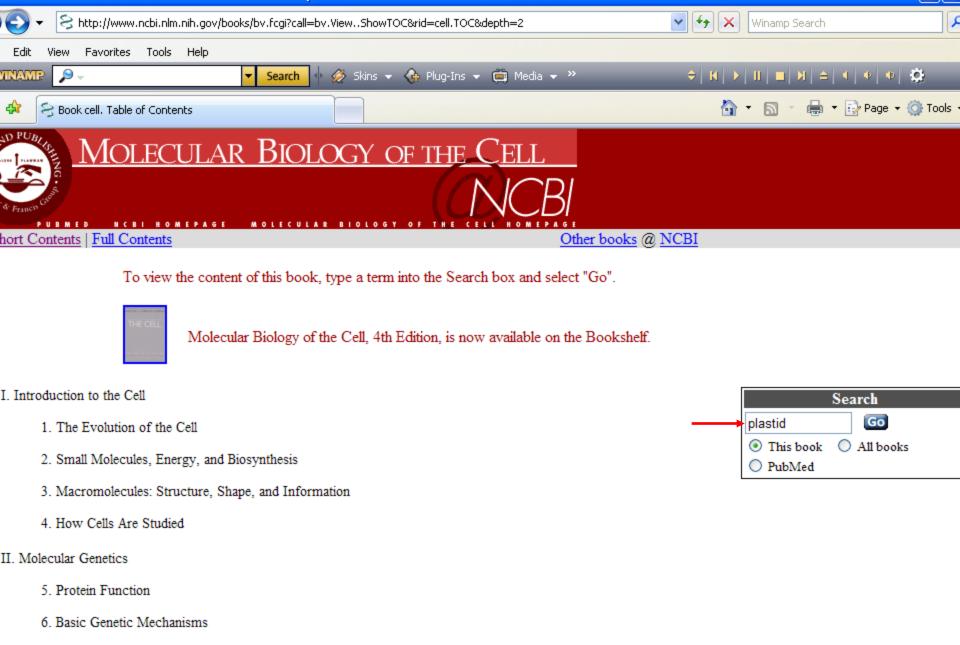
3. Macromolecules: Structure, Shape, and Information

4. How Cells Are Studied

II. Molecular Genetics

- 5. Protein Function
- 6. Basic Genetic Mechanisms
- Recombinant DNA Technology





Recombinant DNA Technology



