**Cell biology - Lecture curriculum**
**2nd semester of academic year 2023/24**

| WEEK | DATE | NR. | TOPIC | LECTURER | SEMINAR | | |
|---|---|---|---|---|---|---|---|
| | | | | | TOPIC | TEACHER I. | TECAHER II. |
| 1 | 13, Febr (Tuesday - MED)<br>15, Febr (Thursday - DENT) | 1 | Introduction. Origin of life.Basic functions and constituents of cells. | VGY | Intro | NE | FZS |
| | 14, Febr (Wednesday - MED)<br>16, Febr (Friday - DENT) | 2 | Cell membrane, intracellular compartmentalization | KT | | | |
| 2 | 20, Febr (Tuesday - MED)<br>22, Febr (Thursday - DENT) | 3 | Passive transport processes | HP | 1-2 | VGY | KT |
| | 21, Febr (Wednesday - MED)<br>23, Febr (Friday - DENT) | 4 | Active transport processes | GK | | | |
| 3 | 27, Febr (Tuesday - MED)<br>29, Febr(Thursday - DENT) | 5 | Ca homeostasis | VZ | 3-4 | HP | VaGY |
| | 28, Febr (TWednesday - MED)<br>1, March (Thursday - DENT) | 6 | Osmo-, volume and pH regulation | PGY | | | |
| 4 | 5, March (Tuesday - MED, **Dent**) | 7 | Cytoskeleton I. (microtubules) | ML | 5-6 | PGY | VZ |
| | 6, March (Wednesday -MED, **Dent**) | 8 | Cytoskeleton II. (intermedier and microfilaments) | ML | | | |
| 5 | 12, March (Tuesday - Med, **Dent**) | 9 | Cell-cell and cell-matrix contacts | GK | 7-8 | ML | NP |
| | 13, March (Wednesday, Med,**Dent**) | 10 | Cellular energetics, mitochondrion, endosymibiosis | SZJ | | | |
| 6 | 19, March (Tuesday - MED, **Dent**) | 11 | Nucleus, chromatin | VaGY | 9-10 | GK | NP |
| | 20, March (Wednesday - MED, **Dent**) | 12 | Transport of proteins synthesized on free ribosomes. Nuclear envelope, transport through nuclear pores | GK | | | |
| | **week7, 1st SCT (Lectures 1-10.) 25 March, Monday** | | | | | | |
| 7 | 26, March (Tuesday - MED, DENT) | 13 | Vesicular transport I. | NP | 11-12 | VaGY | GK |
| | 27, March (Wednesday - MED, DENT) | 14 | Vesicular transport II. | NP | | | |
| 8 | 2, April (Tuesday - MED, DENT) | 15 | Cell division (mitosis, meiosis). Mechanics of cell division. | BZS | 13-14 | SZJ | ML |
| | 3, April (Wednesday - MED, DENT) | 16 | Cell cycle and its regulation | SZG | | | |
| 9 | 9, April (Tuesday - MED, DENT) | 17 | Cell signaling I. General concepts. Nuclear receptors. G-protein coupled receptors | VGY | 15-16 | BZS | SZG |
| | 10, April (Wednesday - MED, DENT) | 18 | Cell signaling II. Receptor tyrosine kinases. The Ras/MAPK, PI3K/Akt and PLC/CaMK pathways | VGY | | | |
| 10 | 16, April (Tuesday - MED, DENT) | 19 | Cell signaling III. Proteolytic Signals. Pathways to the nucleus | SzöÁ | 17-18 | VGY | DBA |
| | 17, April (Wednesday - MED, DENT) | 20 | Cell-cell communication in the nervous and the immune system | SzöÁ | | | |
| 11 | 23, April (Tuesday - MED, DENT) | 21 | Cell fates: Differentiation | DBA | 19-20 | SzöÁ | VGY |
| | 24, April (Wednesday - MED, DENT) | 22 | Cell fates: Oncogenes, tumor cells | VGY | | | |
| | **week 12, 2nd SCT (Lectures 11-20) 29 April, Monday** | | | | | | |
| 12 | 30, April (Tuesday - MED, DENT) | 23 | Cell fates: Cell senescence, apoptosis | BZS | 21-22 | DBA | VGY |
| | **1, May(Wednesday - MED, DENT)** | 24 | Cell fates: Stem cells | PGY | | | |
| 13 | 7, May (Tuesday - MED, DENT) | 25 | From genes to cell function: overview of the main regulatory mechanisms | ZF | 23-24 | BZS | PGY |
| | 8, May(Wednesday - MED, DENT) | 26 | Cell and gene therapies | SzöÁ | | | |
| 14 | 14, May (Tuesday - MED, DENT) | 27 | Cell motility | ML | 25-26 | SzöÁ | ZF |
| | 15, May(Wednesday - MED, DENT) | 28 | Consultation | ZF | | | |