

2023/2024 year
Developmental Biology I (Stem cells and Organoids) (fall semester)

Director of course: *Nandor Nagy, PhD*

Code: AOVANT834_1A

Credit points: 2

Type of course: elective

Topics of the course: Molecular regulation of ontogeny and developmental malformations. Teratogenesis.

Place and time of course: Huzella Lecture Room, every Thursday, 16:30-18:00.

- 1) Introduction to developmental biology and its significance in medical curriculum
7th September (*Nándor Nagy*)
- 2) Beginning of developmental biology. Organization centers, Spemann organiser and its molecular background.
14th September (*Ildikó Bódi*)
- 3) Experimental methods of developmental biology
21th September (*Nándor Nagy*)
- 4) Regulatory factors in ontogeny I. Transcription factors and the extracellular matrix.
28th September (*Ádám Soós, Emőke Szőcs*)
- 5) Regulatory factors in ontogeny II. Signal molecules. Growth factors.
5th October (*Krisztina Herberth-Minkó*)
- 6) Regulatory factors in ontogeny III. CXCR4-CXCL12 signaling in the development.
12th October (*Viktória Gáspár-Halasy*)
- 7) Stem cell biology
19th October (*Nándor Nagy*)
- 8) Role of basal membrane in cell migration, branching of epithelia.
26th October (*Katalin Kocsis*)
- 9) Germ cell line determination: specification, migration, development
2th November (*Dávid Dóra*)
- 10) Gastrulation
9th November (*Nóra Pecsenye-Fejszák*)
- 11) Epithelial stem cells and endoderm differentiation
16th November (*Ildikó Bódi*)
- 12) Patterning of mammalian embryo: antero-posterior and dorso-ventral patterning
23th November (*Krisztina Herberth-Minkó*)
- 13) Formation of embryonic mesoderm
30th November (*Nándor Nagy*)
- 14) Comparative embryology
7th December (*Nándor Nagy*)