

2021/2022 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
9th September (*Nándor Nagy*)
- 2) Experimental methods of developmental biology
16th September (*Nándor Nagy*)
- 3) Beginning of developmental biology. Organization centers, Spemann organiser and its molecular background.
23rd September (*Ildikó Bódi*)
- 4) Regulatory factors in ontogeny I. Transcription factors and Hox genes.
30th September (*Tamás Kovács*)
- 5) Regulatory factors in ontogeny II. Signal molecules. Growth factors.
7th October (*Krisztina Herberth-Minkó*)
- 6) Regulatory factors in ontogeny III. CXCR4-CXCL12 signaling in the development.
14th October (*Viktória Halasy*)
- 7) Stem cell biology
21st October (*Nándor Nagy*)
- 8) Role of basal membrane in cell migration, branching of epithelia.
28th October (*Katalin Kocsis*)
- 9) Germ cell line determination: specification, migration, development
4th November (*Dávid Dóra*)
- 10) Gastrulation
11th November (*Nóra Pecsenye-Fejszák*)
- 11) Epithelial stem cells and endoderm differentiation
18th November (*Ildikó Bódi*)
- 12) Patterning of mammalian embryo: antero-posterior and dorso-ventral patterning
25th November (*Krisztina Herberth-Minkó*)
- 13) Formation of embryonic mesoderm
2nd December (*Nándor Nagy*)
- 14) Comparative embryology
9th December (*Nándor Nagy*)