

2020/2021 year
Developmental Biology I (fall semester)

Director of course: *Nandor Nagy, PhD*

Code: AOVANT457_1A

Credit points: 3

Type of course: elective

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

Place and time of course: Online lecture via Zoom, every Thursday, 16:30-18:00.

- 1) Introduction to developmental biology and its significance in medical curriculum (uploaded lecture)
10th September (*Imre Oláh*)
- 2) Experimental methods of developmental biology
17th September (*Nándor Nagy*)
- 3) Beginning of developmental biology. Organization centers, Spemann organiser and its molecular background.
24th September (*Ildikó Bódi*)
- 4) Regulatory factors in ontogeny I. Transcription factors and Hox genes.
1st October (*Tamás Kovács*)
- 5) Regulatory factors in ontogeny II. Signal molecules. Growth factors.
8th October (*Krisztina Herberth-Minkó*)
- 6) Regulatory factors in ontogeny III. CXCR4-CXCL12 signaling in the development.
15th October (*Viktória Halasy*)
- 7) Stem cell biology
22nd October (*Nándor Nagy*)
- 8) Role of basal membrane in cell migration, branching of epithelia.
29th October (*Katalin Kocsis*)
- 9) Germ cell line determination: specification, migration, development
5th November (*Dávid Dóra*)
- 10) Gastrulation
12th November (*Nóra Pecsénye-Fejszák*)
- 11) Epithelial stem cells and endoderm differentiation
19th November (*Ildikó Bódi*)
- 12) Patterning of mammalian embryo: antero-posterior and dorso-ventral patterning
26th November (*Nándor Nagy*)
- 13) Developmental disorders, teratology
3rd December (*Nándor Nagy*)
- 14) Human reproductive biology (Brain sex)
10th December (*Imre Oláh*)