

**Reproduction & Biotechnology 1. – 2025 Fall**  
Program of Lectures for the English Course 7<sup>th</sup> Semester:  
**TUESDAYS from 08:15 (2x45')**  
in the **HETZEL HENRIK** lecture-hall

1.	9 Sept.	Physiology and reproduction of female animals I. The organization and function of the reproductive tract. Ovarian structures. Estrous cycle and its phases. ( <i>M. Bacsa</i> )
2.	16 Sept.	Physiology and reproduction of female animals II. Regulation of reproduction. Hypothalamus- hypophysis- gonad axis. Reproductive hormones and pheromones. ( <i>M. Bacsa</i> )
3.	23 Sept.	Physiology of reproduction in female animals III. Spontaneous and induced forms of ovulation. Seasonality of reproduction ( <i>L. Lénárt</i> )
4.	30 Sept.	Physiology of reproduction in female animals IV. Development and maturation of the oocyte. Fertilization. Early embryonic development. The concept and species-based characteristics of maternal recognition of pregnancy. ( <i>S. Cseh</i> )
5.	7 Oct.	Porcine reproduction I. Physiology of the oestrus cycle, puberty, onset of cyclic ovarian activity after weaning. The remnants of seasonality and its practical aspects. ( <i>J. Rátky</i> )
6.	14 Oct.	Porcine reproduction II. Fertilization. Early embryonic development. ( <i>J. Rátky</i> )
7.	21 Oct.	Porcine reproduction III. Physiology and hormonal background of porcine pregnancy and parturition. ( <i>J. Rátky</i> )
8.	28 Oct.	Reproduction of cattle I. Puberty. The cyclic ovarian function of the cow. Estrus. Estrus detection. Physiology and pathology of pregnancy (embryonic and fetal development, development of fetal membranes, implantation, endocrinology of pregnancy). ( <i>B. Vincze</i> )
9.	4 Nov.	Reproduction of cattle II. Hormonal background of calving. Phases of calvingThe process of calving ( <i>B. Vincze</i> )
10.	11 Nov.	Reproduction of cattle III The ovarian function in postpartum dairy and beef cows (first ovulation / onset of cyclicity; first estrus; re-conception). Energy imbalance, and protein overfeeding, trace elements and other factors influencing the postpartum reproduction. ( <i>L. Lénárt</i> )
11.	18 Nov.	Reproduction of cattle IV Characteristics of involution. Peri/postpartum metabolic disorders: milk fever, ketosis, and fatty liver disease ( <i>B. Vincze</i> )
12.	25 Nov.	Reproduction of cattle V. Endocrine treatment procedures, estrus synchronization (gestagens, PGF2); induction of ovarian cyclicity (gestagen+eCG, GnRH). ( <i>B. Vincze</i> )
13.	2 Dec.	Reproduction in cattle VI. Induction of ovulation (GnRH); induction and synchronization of cyclicity / ovulation (Ov-synch=GPG) in dairy and beef cattle ( <i>B. Vincze</i> )
14.	9 Dec.	Reproduction of small ruminants: Physiology of the oestrus cycle. Seasonality of reproduction. Induction and synchronization of the oestrus cycle. Methods for improving the ovulation rates. Pregnancy. ( <i>S. Cseh</i> )

**Midterm: 13 November Thursday – 07:15-08:00 – Hetzel + Tormay**

**Retake Midterm: 21 November Friday 07:15-08:00 – Hetzel**