Name of the subject: Reproductive endocrinology

Teacher(s): Tatjana Kostic, PhD, professor; Silvana Andric, PhD, professor

Status of the subject: Elective

Number of ECTS points: 15

Condition: -

Goal of the subject

The aim of this course is to acquire knowledge about the complexity and interconnection of different mechanisms of endocrine control of reproductive function and scientifically based interpretation of experimental data in this field.

Outcome of the subject

After successfully completing the course the student should master the offered knowledge and acquire the ability to critically analyze scientific papers in this field, to acquire the basic knowledge and skills necessary for the realization of the project assignment.

Content of the subject

Theoretical lectures

Neuroendocrinology of reproduction. Testicular function of adult individuals, spermatogenesis. Endocrine testicular activity and steroidogenesis in Leydig cells. Testicular function control, endocrine, paracrine and autocrine control of Leydig cell function. Ovarian function, growth and maturation of the follicles. Endocrine function of the ovary. Menstrual cycle control. Estrus cycle in different mammalian species. Puberty and maturation of the hypothalamic-pituitary-gonadal axis. Fertilization, implantation and placental formation. Endocrinology of pregnancy. Childbirth, lactation, maternal behavior. Endocrinology of infertility in women and men. Menopause. Stress and reproduction.

Practical lectures

Students will choose a common project assignment - literature study, preparation of a work plan, experimental work, processing of results, writing a paper; project assignment will be from the subject area and will be chosen by students in consultation with the subject teachers.

Seminars. Brief presentation of the given topic in the field.

Journal Club. Presentation of the original peer-review scientific paper from the field.

Recommended literature

Group of authors: Reproductive Endocrinology, J.F.Straus and R.L.Barbieri (Eds), Elsevier Saunders, 2016.
Group of authors: Reproductive Endocrinology: A Molecular approach, Chedrese PJ (eds), Springer , 2015.
Review papers and original scientific papers from the field of reproductive endocrinology.

Number of active classes	Theory: 5	Practice: 5

Methods of delivering lectures

Theoretical lectures – integrative lectures, consultations, group discussions. *Students research work* – participation in planning and conducting the experiment as well as data analysis, interpretation and discussion. *Seminar* - Short presentation (10 - 15 min) of the specified topics connected with the subject of student's PhD thesis. *Journal Club* - Presentation of the original peer-review scientific paper with the subject of student's PhD thesis.

Evaluation of knowledge (maximum number of points 100)

Students research work – up to 30 points; Seminar – up to 10 points; "*Journal Club"* – up to 10 points; Oral exam – up to 50 points.