

Doctoral School: **Biology Doctoral School**  
Doctoral Program: Neuroscience and Human Biology

Subject code: **BIO/7/33**

Subject title: **The genetics of human growth L**

Teacher and Neptun code: **Dr. Zsákai Annamária (D5223E)**

Credits: 4

Class hours: 2 hours/week, lecture

#### Aim of the course

The aim of the lecture is to review the genetic basis of human ontogenesis.

#### Course contents

Quantitative and qualitative variations.

The genetics of human fetal growth (the modelling of genetic control, enzyme heterogeneity, tissue-specific isoenzymes, other polymorphisms, mechanisms, chromosomes and fetal development). The genetics of birth weight (one gene loci's influence on birth weight, chromosomal abnormalities and birth weight, biometry of normal birth weight).

The genetics of final height: additive polygenic model, intrafamilial correlations.

The genetics of maturation (the problems of studying maturity status assessment, the limitations of population studies of maturation status, the limits of family studies in maturation status assessment, the assessment of maturation status at birth, the genetics of dental development and dental eruption, population differences in postnatal bone development, the genetics of sexual maturation).

The genetics of ageing: the features of ageing, the genetics of its features timing, population differences.

Twin pregnancies, the growth of twins (placentation, vascular anastomosis, prenatal effects of twin pregnancies, prenatal development of twins, postnatal development of twins, catch-down growth, catch-up growth, regeneration period).

#### Requirements

Oral exam

#### Literature

lecture slides available

