

PRACTICAL COURSE IN CELL AND MOLECULAR BIOLOGY
for English-speaking pharmacy students

Time	Practical
1st week	Techniques for light microscopy.
2nd week	DNA and chromatin. Giant chromosomes in larvae of dipteran insects. Barr body in oral mucosa cells.
3rd week	Cell cycle. Mitosis.
4th week	Karyotype. Normal human karyotype. <i>Please bring scissors for paper.</i>
5th week	Meiosis. Gametogenesis.
6th week	Fertilization. <i>In vitro</i> fertilization in a mouse model.
7th week	Early animal development: cleavage, gastrulation, organogenesis.
8th week	Cells and organs involved in immune response. Lymphocytes, phagocytes. Preparation and evaluation of lymphocyte suspensions.
9th week	Human alloantigens. ABO and Rhesus blood group systems. Blood group testing. Blood group inheritance.
10th week	Immunological methods. Agglutination: serum titration. Precipitation: ring test, Ouchterlony test. ELISA.
11th week	Mendelian inheritance. Morbid risk. Solving genetic problems.
12th week	Molecular biology methods – PCR, FISH. Pharmacogenetics.
13th week	COLLOQUIUM.
14th week	Gene, structural chromosomal and numerical chromosomal mutations. Evolutionary and medical importance of mutations.
15th week	Venomous animals, poisonous plants and fungi.

This schedule is valid from academic year 2016-17 onwards.