

**Thematic plan of practical lessons on Molecular Biology  
of 5<sup>th</sup> course, 9<sup>th</sup> semester, (educational years 2018-2019)**

<b>№№</b>	<b>Dates</b>	<b>Theme of practical lessons</b>	<b>Time</b>
1.	17.09-18.09 22.10-23.10 26.11-27.11	Cellular Basis of Inheritance	2
2.	20.09-21.09 25.10-26.10 29.11-30.11	DNA Repairing, Mutations, Classification & Problems of Mutagenesis	2
3.	24.09-25.09 29.10-30.10 3.12-4.12	Inborn Errors of Metabolism.	2
4.	27.09-28.09 1.11-2.11 6.12-7.12	Problems of Cell Death And Apoptosis. Hayflick Limit.	2
5.	1.10-2.10 5.11-6.11 10.12-11.12	Passing of Module	2
6.	4.10-5.10 8.11-9.11 13.12-14.12	Human Cytogenetics, Modern Trends of Molecular Cytogenetics.	2
7.	8.10-9.10 12.11-13.11 17.12-18.12	Gel Electrophoresis, Northern and Southern Blotting.	2
8.	11.10-12.10 15.11-16.11 20.12-21.12	Medical implications of Gene Technology Stem cell therapy	2
9.	15.10-16.10 19.11-20.11 24.12-25.12	Small group discussion/assignment of projects, Group Presentation	2
10.		Total	18

**Head of Department, Professor**

**Khudaibergenova B.M**

**Thematic plan of lectures on Molecular Biology  
of 5th course, 9th semester, (educational years 2018-2019)**

<b>№№</b>	<b>Dates</b>	<b>Themes of lectures</b>	<b>Time</b>
1.	17.09-18.09 22.10-23.10 26.11-27.11	Introduction to Molecular biology	2
2.	20.09-21.09 25.10-26.10 29.11-30.11	DNA Structure & Replication. Genetic code.	2
3.	24.09-25.09 29.10-30.10 3.12-4.12	Protein synthesis: Transcription, Translation.	2
4.	27.09-28.09 1.11-2.11 6.12-7.12	Controlling of Gene Expression. Model of operon. Regulation of an expression of genes. Gene regulation – operon concept Gene regulation - repression	2
5.	1.10-2.10 5.11-6.11 10.12-11.12	Controlling of Cell Cycle, Cyclins & Cyclin-dependent kinases.	2
6.	4.10-5.10 8.11-9.11 13.12-14.12	Molecular biology of Cancer . Classification of oncogenes, Warburg effect, Human oncogenic viruses.	2
7.	8.10-9.10 12.11-13.11 17.12-18.12	Review of General Principles Of Gene Technology	2
8.	11.10-12.10 15.11-16.11 20.12-21.12	DNA Technology: DNA Sequencing	2
9.	15.10-16.10 19.11-20.11 24.12-25.12	Methods of Cell biology in Medicine. Embryo Cloning & Nuclear Transfer	2
10.	17.09-18.09 22.10-23.10 26.11-27.11	Total	18

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