



# Hands-on Workshop on “Basic Techniques in Molecular Biology and Animal Tissue Culture”

**21-27 December, 2023**

**BKL Walawalkar Rural Medical College, Ratnagiri.**

Day 1 Thursday 21 December 2023	
09.00-09.30	Breakfast
09.30 – 10.00	About the workshop – Dr. Rita Mulherkar, Convener, Workshop - <b>Pre-test</b>
10.00 - 10.30	Good Laboratory Practice (GLP) – Neelam Shirsat - <b>Lecture 1</b>
10.30 – 11.00	Introduction to Nucleic Acids – Neelam Shirsat - <b>Lecture 2</b>
11.00-11.15	Tea
11.15-13.00	Lab exercise – Preparing Molar solutions and use of micropipettes
13.00 – 13.30	Lunch
13.30- 17.00	Lab exercise - DNA isolation from blood buffy coat
17.00-17.30	Nobel Prize for Physiology and Medicine – Surendra Ghaskadbi – <b>Lecture 3</b>
Day 2 Friday 22 December 2023	
08.30 – 09.30	Breakfast
09.30 – 10.00	Polymerase Chain Reaction – Neelam Shirsat - <b>Lecture 4</b>
10.00 – 11.30	Practical on setting up PCR, RE digestion and Agarose gel electrophoresis
11.30 – 11.45	Tea
11.45 - 13.00	Lecture on RNA and practical on RNA isolation – Neelam Shirsat - <b>Lecture 5</b>
13.00 – 13.30	Lunch
13.30 – 17.30	Practical - RNA isolation from cells in culture or tissue
17.30-18.00	Recombinant DNA Technology – Saroj Ghaskadbi Part I - <b>Lecture 6</b>
Day 3 Saturday 23 December 2023	
08.30 – 09.15	Breakfast
09.30 – 10.15	Inauguration Welcome – Dr. Suvarna Patil, Medical Director, BKL Walawalkar Hospital Felicitation of Dignitaries and invited faculty Welcome - Dr. V. Chauhan, Chairman, Sun Pharma Science Foundation Vote of thanks – Dr. Amit Nasa, Secretary, SPSF
10.15 – 10.30	Tea
10.30 – 11.00	Application of qPCR – Shelke/Nakhate - <b>Lecture 8</b>
11.00-11.30	Sequencing and Microarray – TBA - <b>Lecture 7</b>
11.30 - 14.00	Practical - cDNA synthesis and qPCR
14.00 – 14.30	Lunch
14.30 – 17.30	Practical - qPCR continued
17.30-18.00	Recombinant DNA Technology – Saroj Ghaskadbi Part II - <b>Lecture 9</b>

Day 4 Sunday 24 December 2023	
08.30 – 09.15	Breakfast
09.30 – 10.00	Proteins and protein purification methods – Rohit Bhat - <b>Lecture 10</b>
10.00 – 10.30	Flow Cytometry and its application – Nishigandha Naik - <b>Lecture 11</b>
10.30 – 11.00	Tea
11.00 – 14.00	Practical – Protein estimation and SDS-PAGE
14.00 - 14.30	Lunch
14.30 – 17.30	Practical – Silver staining, Western blotting and ELISA
17.30 – 18.00	Recombinant DNA Technology – Saroj Ghaskadbi Part III - <b>Lecture 12</b>
Day 5 Tuesday 26 December 2023	
08.30 – 09.15	Breakfast
09.30 – 10.30	Practical - Western blotting and staining of blot (continued)
10.30 – 11.00	Introduction to Animal Tissue Culture – Rita Mulherkar - <b>Lecture 13</b>
11.00-11.30	Cancer Stem Cells – Sharmila Bapat - <b>Lecture 14</b>
11.30 – 11.45	Tea
11.45 - 14.00	Practical - Tissue culture and cell lines maintenance (Split participants in 3 groups)
14.00 – 14.30	Lunch
14.30 – 17.30	Video on setting up primary disc culture and demonstration of lymphocyte culture
17.30-18.00	Karyotyping and its applications – Mrinalini Moghe - <b>Lecture 15</b>
Day 6 Wednesday 27 December 2023	
08.30 – 09.15	Breakfast
09.30 – 10.30	Post-test and discussion
10.30 – 11.30	Valedictory function
11.30 – 11.45	Tea

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