

Hands-On DNA Sequencing Workshop's Plan

18 -22nd December, 2023

Time	Activity	Moderator and Venue
DAY 1		
10.00 – 11.15 am	Inauguration Ceremony Welcome Note from Director CAMB	(Riazuddin Auditorium) Prof. Rehan Sadiq Shaikh
	Brief Overview of the Workshop	Dr Muhammad Farooq Sabar
	Some Thoughts from the Chief Guest Vice-Chancellor Punjab University	Prof. Dr Khalid Mahmood
	Vote of Thanks by Director CEMB	Prof. Moazur Rahman
11.15 am	Tea	(Riazuddin Auditorium Side Rooms)
11.45 – 12.30 am	Lecture: Overview of Mini-Projects 1- Sanger Sequencing for Human Genetic Disease Diagnosis 2- Sanger Sequencing for Microbial characterization 3- SnapShot Genotyping	Dr Mariam Shahid Dr Ghulam Zahra Jahangir Dr Muhammad Usman Ghani (Lecture Room Adjacent to CEMB Library)
	Hands-On: DNA Extraction 1- Human DNA Extraction from Blood 2- Bacterial DNA Extraction	Instructor No. 1 (Dr Usman Ghani / Dr Farheena Iqbal/Dr Samra Kousar) Instructor No. 2 (Dr Ghulam Zahra)
	Hands-On: DNA quantification (Agarose Gel Electrophoresis and Nanodrop)	Instructor No. 1 (Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal) Instructor No. 2 (Dr Ghulam Zahra)
1.00 pm	Lunch & Prayer Break	
2.00 - 5.00 pm	Hands-On: DNA Extraction 1- Human DNA Extraction from Blood 2- Bacterial DNA Extraction Hands-On: DNA quantification (Agarose Gel Electrophoresis and Nanodrop)	Instructor No. 1 (Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal) Instructor No. 2 (Dr Ghulam Zahra)
DAY 2		
9.00 – 10.00 am	Lecture: PCR, its Chemistry & Types	Dr Sameera Hassan / Dr Bushra Ijaz (Lecture room Adjacent to CEMB Library)
10.00 – 11.00 am	Hands-On: Primer Designing for Amplicon Sequencing and SNaPshot Mini-Sequencing	Dr Farheena Iqbal / Dr Usman Ghani (Lecture room Adjacent to CEMB Library)
11.00 am	Tea	
11.30 – 1.00 pm	Hands-On: PCRs 1- Amplicon PCR for Mutational Detection 2- Bacterial 16S Gene Amplification	Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal / Dr Ghulam Zahra

	3- SNaPshot Mini-Sequencing	
1.00 pm	Lunch & Prayer Break	
2.00 – 5.00 pm	Hands-On: Post PCR purification and DNA Quantification (Nanodrop)	Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal / Dr Ghulam Zahra
DAY 3		
9.00 – 10.00 am	Lecture: Insight of Sanger Sequencing Chemistry and Genetic Analysers	Dr Muhammad Farooq Sabar (Lecture room Adjacent to CEMB Library)
10.00 – 11.00 am	Hands-On: Sequencing PCR for Human Mutational Analysis	Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal
11.00 am	Tea	
11.30 – 1.00 pm	Hands-On: Sequencing PCR for Microbial Characterization	Dr Usman Ghani / Dr Samra / Dr Farheena Iqbal
1.00 pm	Lunch & Prayer Break	
2.00 – 5.00 pm	Hands-On: Purification of Sequencing PCR	Dr Usman Ghani / Dr Samra Kousar / Dr Farheena Iqbal
DAY 4		
9.00 – 11.00 am	Hands-On: Machine Running and Briefing on Results Interpretation	Dr Muhammad Farooq Sabar (DNA Core Facility)
11.00 am	TEA	
11.30 – 1.00 am	Hands-On: Genomic and Phylogenetic Analysis	Dr Mariam Shahid / Dr Usman Ghani / Dr Farheena Iqbal (Lecture room Adjacent to CEMB Library)
1.00 pm	Lunch & Prayer Break	
2.00 – 5.00 pm	Hands-On: Genomic and Phylogenetic Analysis	Dr Farheena Iqbal / Dr Usman Ghani / Dr Mariam Shahid (Lecture room adjacent to CEMB Library)
Day 5		
9.00 – 10.45 am	Lecture: Next Generation Sequencing – <i>Applications and Sample Preparation</i>	Guest Speaker (Lecture room Adjacent to CEMB Library)
10.45 – 12.30 am	Lecture: Next Generation Sequencing – <i>Data Analysis and Troubleshooting</i>	Guest Speaker (Lecture room Adjacent to CEMB Library)
12.30 pm	Jumma Prayer Break	
2.00 – 4.00 pm	Closing Ceremony Welcome note from Director CEMB	(Riazuddin Auditorium) Prof. Moazur Rahman
	Views from Workshop participants	Any participant
	Address of Chief Guest	Chief Guest
	Vote of Thanks by Director CAMB	Prof. Rehan Sadiq Shaikh