

SBASSE Life Sciences Workshop 2022 on Genetics and Genomics
August 22-26, 2022

August 22, Monday 2022 (day 1)	
9:00 – 9:55	Meet and greet, get to know each other, find future mentors and collaborators, make friends
9:55 – 10:00	Short break
10:00 – 10:45	Genetics, genomics, and epigenomics Muhammad Tariq - LUMS
10:45 – 11:05	Tea/coffee break
11:05 – 12:00	Introduction to mutations, mutagens, and genetic screens Muhammad Tariq - LUMS
12:00 – 13:30	Lunch
13:30 – 14:30	How to perform genetic screens, analyze mutants and discover new genes? Zaigham Shahzad - LUMS
14:30 – 14:35	Short break
14:35 – 15:35	Case studies of <i>Arabidopsis</i> classical genetic screens, screens for altered reporter gene expression, and reverse genetic approaches to confirm genes influencing phenotypes. Zaigham Shahzad - LUMS
15:35 – 16:00	Tea/coffee break
16:00 – 17:00	Screen for second-site genetic modifiers and natural allelic variation Zaigham Shahzad - LUMS
	Dinner
August 23, Tuesday 2022 (day 2)	
9:00 – 9:55	Genome-wide gene expression analysis (wild type v/s mutants) Khurram Bashir - LUMS
9:55 – 10:00	Short break
10:00 – 10:50	Gene ontology analysis and prediction and validation of gene regulatory networks Khurram Bashir- LUMS
10:50 – 11:10	Tea/coffee break
11:10 – 12:20	Targeted gene expression analysis through qPCR Khurram Bashir - LUMS
12:20 – 13:40	Lunch
13:40 – 14:30	Genome editing approaches to induce locus specific mutations Muhammad Shoaib - LUMS
14:30 – 14:35	Short break
14:35 – 15:40	Transgenics, cells lines, and epitope tagging Muhammad Shoaib - LUMS
15:40 – 16:00	Tea/coffee break
16:00 – 17:00	Tissue-specific and subcellular localization Khurram Bashir - LUMS
	Dinner

August 24, Wednesday 2022 (day 3)	
9:00-9:50	Screening rice T-DNA library Khurram Bashir - LUMS
9:50 – 9:55	Short Break
9:55-10:30	Screening rice T-DNA library Continued Khurram Bashir - LUMS
10:30-10:50	Coffee Break
10:50-11:30	Screening rice T-DNA library Continued Khurram Bashir - LUMS
11:30-11:35	Short Break
11:35-12:20	Screening rice T-DNA library Continued Khurram Bashir - LUMS
12:20 – 13:40	Lunch
13:40-14:40	DNA methylation mutant screens Zaigham Shahzad - LUMS
14:40-14:45	Short Break
14:45-15:40	DNA methylation evolution Zaigham Shahzad - LUMS
15:40 – 16:00	Coffee Break
16:00-17:00	Hands-on drought tolerance test in <i>Arabidopsis</i> Khurram Bashir - LUMS
18:00-20:30	Dinner
August 25, Thursday 2022 (day 4)	
9:00-9:50	Genome editing systems Muhammad Shoaib - LUMS
9:50 – 9:55	Short break
9:55-10:30	Genome editing systems Muhammad Shoaib - LUMS
10:30-10:50	Coffee break
10:50-11:30	Genome editing systems continued Muhammad Shoaib - LUMS
11:30-11:35	Short Break
11:35-12:20	Genome editing systems continued Muhammad Shoaib - LUMS
12:20 – 13:40	Lunch
13:40 – 14:40	Genome-wide RNA-interference screens Muhammad Tariq - LUMS
14:50 – 15:15	Tea/coffee break
15:15 – 16:45	Genome-wide RNA-interference screens continued Muhammad Tariq- LUMS
18:30-20:30	GALA Dinner

August 26, Friday 2022 (day 5)

9:00-9:35	Amir Faisal - LUMS
9:35- 10:05	Safee Ullah Chaudhary - LUMS
10:05- 10:40	Shahzad UL Hassan
10:40 – 11:10	Coffee Break
11:10-11:45	Shaper Mirza - LUMS
11:45-12:10	Final remarks/Certificate Distribution Muhammad Tariq - LUMS