

9. To demonstrate absence of crossing over in *Drosophila* males
 10. To establish dominance relationship between multiple alleles of a gene
 11. To demonstrate that the white-eyed flies have a deposition defect
 12. To perform cis-trans test of allelism with the given eye colour mutants
 13. To demonstrate dosage compensation in *Drosophila melanogaster*
 14. To create a Bar and apricot eyed double mutant
 15. To detect recessive lethal alleles in genetic crosses
 16. To study the penetrance and expressivity of serrate and vestigial wings in *Drosophila melanogaster*
 17. To study the characteristics of X-linked dominant traits
 18. To separate eye pigments (pterins) by thin layer chromatography
 19. To prepare stained squashes of salivary glands showing well spread polytene chromosomes
 20. To demonstrate recombination within a gene
 21. To determine the inheritance pattern of white eye colour and vestigial wings from the F2 data
 22. To dissect the malpighian tubules, brain and imaginal discs from the third instar *Drosophila* larva
 23. To analyse using bioinformatic tools *Drosophila* as a model system (Toll 9 gene) for human diseases (asthma)
 24. To test for PTC tasting in a random population and to calculate allele and genotype frequency using Hardy Weinberg law
 25. To determine the ABO blood groups in a random sample and calculate the allele frequency using Hardy Weinberg law
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About the Author

Sunita Joshi :- Dr. Sunita Joshi is presently an associate professor at Department of Biochemistry, Daulat Ram College, University of Delhi with more than 25 years of teaching experience. She has trained around 100 students from Botany, Biochemistry and Life Sciences in *Drosophila* Genetics in last three years. She is a resource person at ILLL, DU; DBT; CBSE. She is a co-author of Textbook of Biotechnology, Class XI (CBSE). She is also an educationist member in KVS for the past 5 years and reviewer of courses in Biochemistry offered by IGNOU. Dr. Sunita Joshi is the recipient of M.N Gupta memorial award, 2003.

Neeru Dhamija :- Dr. Neeru Dhamija is presently an assistant professor at Department of Biochemistry, Daulat Ram College, University of Delhi. She has M.Sc. in Biochemistry and a doctorate in Biotechnology with specialization in HIV Biology. She studied the role of HIV-1 Tat protein in regulation of host cellular genes, under the guidance of Dr. Debashis Mitra at National Centre for Cell Science. She has trained around 70 students from Botany, Biochemistry and Life Sciences in *Drosophila* Genetics in last two years. She has also worked as assistant professor at Cluster Innovation Centre, DU. She is also an eContent writer in UGC-ePG Paathshaala (Chemistry).