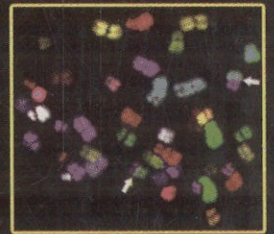


# **CYTOGENETICS, EVOLUTION, BIOSTATISTICS AND PLANT BREEDING**

---

**R.S. SHUKLA  
P.S. CHANDEL**



**S. CHAND**



# CONTENTS

---

## CYTOLOGY

1. The Cell	1
2. Cell Membrane	31
3. Plastids	45
4. Mitochondria	59
5. Endoplasmic Reticulum and Ribosomes	69
6. Golgi Complex	78
7. Lysosomes and Microbodies	82
8. Nucleus	88
9. Chromosomes	95
10. Nucleic Acids	122
11. Division of Cell	164

## GENETICS

12. Development of Genetics as a Branch of Biology	185
13. Mendel and his laws of Heredity	189
14. Correlation between Mendel's theory and Chromosomes' Behaviour	203
15. The Expansions of Mendelian Laws	206
16. Linkage and Crossing Over	224
17. Sex Determination and Sex Linkage	233
18. Cytoplasmic Inheritance or Extranuclear Inheritance	253
19. Modern Concept of Gene	269
20. Gene Action	278
21. The Genetic Code and Regulation of Protein Synthesis	291
22. Mutation	300
23. Variations in Chromosome Number	329
24. Genetic Engineering or Recombinant DNA Technology	355
25. Micropropagation of Plants (Tissue Culture)	378
26. Modern Concept on the Origin of Life	382
27. Evolution	391

## **BIOSTATISTICS**

28. Biostatistics or Biometry	415
29. Data presentation	419
30. Measures of Central Tendency	425
31. Measures of Dispersion or spread	439
32. Probability	450
33. Tests of significance	458
34. Correlation	472
35. Regression	482

## **PLANT BREEDING**

36. Plant Breeding	491
37. Pollination Control	494
38. Methods of Crop Improvement	504
39. Breeding Work on Some Important Crops	533