

PROGRAM EPIGENETICS

Prof. Schoeftner – 6 CFU

TEXTBOOK: “Epigenetics”, Second Edition, CSH Press

1. Overview and Concepts
2. Writers and Readers of Histone Acetylation
3. Erasers of Histone Acetylation
4. Structural and Functional Coordination of DNA and Histone methylation
5. Position Effect Variegation, Heterochromatin Formation and Gene Silencing In *Drosophila*
6. RNAi and Heterochromatin assembly
7. Polycomb group and Trithorax group proteins
8. Histone Variants and Epigenetics
9. Maintenance of Epigenetic Information
10. Genomic Imprinting in Mammals
11. Induced Pluripotency and Epigenetic Reprogramming
12. Epigenetics and Human Disease
13. Epigenetic Determinants of Cancer
14. Histone modifications and Cancer