

DNA Option Course 2018 - 2019

Reading List for the Level 4 DNA option - Semester 1 2018/19

View Online



-
1.

Lodish HF. Molecular cell biology. 7th ed., international ed. New York: W.H. Freeman and Company; 2013.
 2.

Alberts B. Molecular biology of the cell. Sixth edition. New York, NY: Garland Science, Taylor and Francis Group; 2015.
 3.

Krebs JE, Goldstein ES, Kilpatrick ST. Lewin's genes XII. 12th ed. Burlington, Mass: Jones & Bartlett Learning; 2018.
 4.

Calladine CR. 1. Understanding DNA: the molecule & how it works. 3rd ed. San Diego, Calif: Academic; 2004.
 5.

Watson JD, Crick FHC. 2. A Structure for Deoxyribose Nucleic Acid [Internet]. 1953. Available from:
<https://login.uofglasgow.idm.oclc.org/login?url=https://www.nature.com/articles/171737a0.pdf>
 - 6.

Nelson HCM, Finch JT, Luisi BF, Klug A. 3. The structure of an oligo(dA)-oligo(dT) tract and its biological implications. *Nature* [Internet]. 1987 Nov 19;330(6145):221–6. Available from: <https://login.uofglasgow.idm.oclc.org/login?url=https://www.nature.com/nature/journal/v330/n6145/abs/330221a0.html>

7.

Hänsel-Hertsch R, Di Antonio M, Balasubramanian S. 4. DNA G-quadruplexes in the human genome: detection, functions and therapeutic potential. *Nature Reviews Molecular Cell Biology*. 2017 Feb 22;18(5):279–84. doi:10.1038/nrm.2017.3

8.

Chandrasekaran AR, Anderson N, Kizer M, Halvorsen K, Wang X. 5. Beyond the Fold: Emerging Biological Applications of DNA Origami. *ChemBioChem*. 2016 Jun 16;17(12):1081–9. doi:10.1002/cbic.201600038

9.

Rohs R, Jin X, West SM, Joshi R, Honig B, Mann RS. 6. Origins of Specificity in Protein-DNA Recognition. *Annual Review of Biochemistry*. 2010 Jun 7;79(1):233–69. doi:10.1146/annurev-biochem-060408-091030

10.

Rice PA, Yang S wei, Mizuuchi K, Nash HA. 7. Crystal Structure of an IHF-DNA Complex: A Protein-Induced DNA U-Turn. *Cell*. 1996 Dec;87(7):1295–306. doi:10.1016/S0092-8674(00)81824-3

11.

Bogdanove AJ, Bohm A, Miller JC, Morgan RD, Stoddard BL. Engineering altered protein–DNA recognition specificity. *Nucleic Acids Research*. 2018 Jun 1;46(10):4845–71. doi:10.1093/nar/gky289

12.

Hille F, Richter H, Wong SP, Bratovič M, Ressel S, Charpentier E. The Biology of CRISPR-Cas: Backward and Forward. *Cell*. 2018 Mar;172(6):1239–59. doi:10.1016/j.cell.2017.11.032

13.

Gilbert N, Allan J. Supercoiling in DNA and chromatin. *Current Opinion in Genetics & Development*. 2014 Apr;25:15–21. doi:10.1016/j.gde.2013.10.013

14.

Schoeffler AJ, Berger JM. 11. DNA topoisomerases: harnessing and constraining energy to govern chromosome topology. *Quarterly Reviews of Biophysics*. 2008 Feb;41(01). doi:10.1017/S003358350800468X

15.

Nogales E, Louder RK, He Y. 12. Structural Insights into the Eukaryotic Transcription Initiation Machinery. *Annual Review of Biophysics*. 2017 May 22;46(1):59–83. doi:10.1146/annurev-biophys-070816-033751

16.

Nudler E. 13. RNA Polymerase Active Center: The Molecular Engine of Transcription. *Annual Review of Biochemistry*. 2009 Jun;78(1):335–61. doi:10.1146/annurev-biochem.76.052705.164655

17.

Lelli KM, Slattery M, Mann RS. 14. Disentangling the Many Layers of Eukaryotic Transcriptional Regulation. *Annual Review of Genetics*. 2012 Dec 15;46(1):43–68. doi:10.1146/annurev-genet-110711-155437

18.

Rowley MJ, Corces VG. Organizational principles of 3D genome architecture. *Nature Reviews Genetics*. 2018 Dec;19(12):789–800. doi:10.1038/s41576-018-0060-8

19.

Clapier CR, Iwasa J, Cairns BR, Peterson CL. 16. Mechanisms of action and regulation of ATP-dependent chromatin-remodelling complexes. *Nature Reviews Molecular Cell Biology*.

2017 May 17;18(7):407–22. doi:10.1038/nrm.2017.26

20.

Uhlmann F. 17. SMC complexes: from DNA to chromosomes. *Nature Reviews Molecular Cell Biology*. 2016 Apr 14;17(7):399–412. doi:10.1038/nrm.2016.30

21.

Pomerantz RT, O'Donnell M. 18. Replisome mechanics: insights into a twin DNA polymerase machine. *Trends in Microbiology*. 2007 Apr;15(4):156–64. doi:10.1016/j.tim.2007.02.007

22.

Renkawitz J, Lademann CA, Jentsch S. 19. Mechanisms and principles of homology search during recombination. *Nature Reviews Molecular Cell Biology*. 2014 May 14;15(6):369–83. doi:10.1038/nrm3805

23.

Kaniecki K, De Tullio L, Greene EC. A change of view: homologous recombination at single-molecule resolution. *Nature Reviews Genetics*. 2017 Dec 11;19(4):191–207. doi:10.1038/nrg.2017.92

24.

Wigley DB. 21. Bacterial DNA repair: recent insights into the mechanism of RecBCD, AddAB and AdnAB. *Nature Reviews Microbiology*. 2012 Dec 3;11(1):9–13. doi:10.1038/nrmicro2917

25.

Lesbats P, Engelman AN, Cherepanov P. 23. Retroviral DNA Integration. *Chemical Reviews*. 2016 Oct 26;116(20):12730–57. doi:10.1021/acs.chemrev.6b00125

26.

Liu D, Keijzers G, Rasmussen LJ. 24. DNA mismatch repair and its many roles in eukaryotic cells. *Mutation Research/Reviews in Mutation Research*. 2017 Jul;773:174-87. doi:10.1016/j.mrrev.2017.07.001

27.

Goodarzi AA, Jeggo PA. 25. The Repair and Signaling Responses to DNA Double-Strand Breaks. *Adv Genet*. 2013;82:1-45. doi:10.1016/B978-0-12-407676-1.00001-9

28.

Marteijn JA, Lans H, Vermeulen W, Hoeijmakers JHJ. 26. Understanding nucleotide excision repair and its roles in cancer and ageing. *Nature Reviews Molecular Cell Biology*. 2014 Jun 23;15(7):465-81. doi:10.1038/nrm3822

29.

Pennisi E. DNA's Cast of Thousands. *Science*. 2003 Apr 11;300(5617):282-5. doi:10.1126/science.300.5617.282

30.

Abe N, Dror I, Yang L, Slattery M, Zhou T, Bussemaker HJ, et al. Deconvolving the Recognition of DNA Shape from Sequence. *Cell*. 2015 Apr;161(2):307-18. doi:10.1016/j.cell.2015.02.008

31.

Swinger KK, Rice PA. IHF and HU: flexible architects of bent DNA. *Current Opinion in Structural Biology*. 2004 Feb;14(1):28-35. doi:10.1016/j.sbi.2003.12.003

32.

Ledford H. Five big mysteries about CRISPR's origins. *Nature*. 2017 Jan 12;541(7637):280-2. doi:10.1038/541280a

33.

Adli M. The CRISPR tool kit for genome editing and beyond. *Nature Communications*. 2018 Dec;9(1). doi:10.1038/s41467-018-04252-2

34.

Chen SH, Chan NL, Hsieh T shih. New Mechanistic and Functional Insights into DNA Topoisomerases. *Annual Review of Biochemistry*. 2013 Jun 2;82(1):139-70. doi:10.1146/annurev-biochem-061809-100002

35.

Tessarz P, Kouzarides T. Histone core modifications regulating nucleosome structure and dynamics. *Nature Reviews Molecular Cell Biology*. 2014 Oct 15;15(11):703-8. doi:10.1038/nrm3890

36.

Doublé S, Zahn KE. Structural insights into eukaryotic DNA replication. *Frontiers in Microbiology*. 2014 Aug 25;5. doi:10.3389/fmicb.2014.00444

37.

West SC. The search for a human Holliday junction resolvase. *Biochemical Society Transactions*. 2009 Jun 1;37(3):519-26. doi:10.1042/BST0370519

38.

Montaño SP, Rice PA. Moving DNA around: DNA transposition and retroviral integration. *Current Opinion in Structural Biology*. 2011 Jun;21(3):370-8. doi:10.1016/j.sbi.2011.03.004

39.

Modrich P. Mechanisms in *Prokaryotic and Human Mismatch Repair* (Nobel Lecture). *Angewandte Chemie International Edition*. 2016 Jul 18;55(30):8490-501. doi:10.1002/anie.201601412

40.

Deindl S, Hwang WL, Hota SK, Blosser TR, Prasad P, Bartholomew B, et al. ISWI Remodelers Slide Nucleosomes with Coordinated Multi-Base-Pair Entry Steps and Single-Base-Pair Exit Steps. *Cell*. 2013 Jan;152(3):442–52. doi:10.1016/j.cell.2012.12.040

41.

Graham JE, Mariani KJ, Kowalczykowski SC. Independent and Stochastic Action of DNA Polymerases in the Replisome. *Cell*. 2017 Jun;169(7):1201–1213.e17. doi:10.1016/j.cell.2017.05.041

42.

Terakawa T, Bisht S, Eeftens JM, Dekker C, Haering CH, Greene EC. The condensin complex is a mechanochemical motor that translocates along DNA. *Science*. 2017 Nov 3;358(6363):672–6. doi:10.1126/science.aan6516

43.

Jia R, Chai P, Zhang H, Fan X. Novel insights into chromosomal conformations in cancer. *Molecular Cancer*. 2017 Dec;16(1). doi:10.1186/s12943-017-0741-5

44.

M Ryan Corces et al. The chromatin accessibility landscape of primary human cancers. *Science* [Internet]. 2018. Available from: <http://science.sciencemag.org/content/362/6413/eaav1898.long>

45.

Wright AV, Liu JJ, Knott GJ, Doxzen KW, Nogales E, Doudna JA. Structures of the CRISPR genome integration complex. *Science*. 2017 Sep 15;357(6356):1113–8. doi:10.1126/science.aao0679

46.

Ludmil B Alexandrov et al. Mutational signatures associated with tobacco smoking in human cancer. Mutational signatures associated with tobacco smoking in human cancer [Internet]. 2016. Available from: <https://login.uofglasgow.idm.oclc.org/login?url=http://science.sciencemag.org/content/354/6312/618.long>

47.

Ludmil B Alexandrov. Understanding the origins of human cancer. Science [Internet]. 2018. Available from: <http://science.sciencemag.org/content/350/6265/1175.1.long>

48.

Zhao W, Steinfeld JB, Liang F, Chen X, Maranon DG, Jian Ma C, et al. BRCA1-BARD1 promotes RAD51-mediated homologous DNA pairing. Nature. 2017 Oct 4;550(7676):360–5. doi:10.1038/nature24060

49.

Cejka P. Biochemistry: Complex assistance for DNA invasion. Nature. 2017 Oct 4. doi:10.1038/nature24149