

Genes, Molecules and Cells-2

Second year course, running in Semester-2, for all Biomolecular science students.

View Online



1.

Interactive Concepts in Biochemistry - Content by Chapter.

2.

Jeremy M Berg. Biochemistry. <https://www.ncbi.nlm.nih.gov/books/NBK21154/?depth=2> (2002).

3.

Reece, J. B. & Campbell, N. A. Campbell biology: Jane B. Reece ... [et al.]. (Pearson Education, 2011).

4.

Lehninger, A. L., Nelson, D. L. & Cox, M. M. Lehninger principles of biochemistry. (W.H. Freeman, 2013).

5.

Alberts, B. Molecular biology of the cell. (Garland Science, 2008).

6.

Griffiths, A. J. F., Wessler, S. R., Carroll, S. B. & Doebley, J. F. Introduction to genetic analysis. (W.H. Freeman & Company, a Macmillan Education imprint, 2015).

7.

Falchi, M. et al. Low copy number of the salivary amylase gene predisposes to obesity. *Nature Genetics* **46**, 492–497 (2014).

8.

Wyckoff, G. J., Wang, W. & Wu, C.-I. Rapid evolution of male reproductive genes in the descent of man. *Nature* **403**, 304–309 (2000).

9.

Perry, G. H. et al. Diet and the evolution of human amylase gene copy number variation. *Nature Genetics* **39**, 1256–1260 (2007).

10.

Regulation of the Lactase Gene | HHMI BioInteractive.

11.

Williamson, M. P. *How proteins work*. (Garland Science, 2012).

12.

Proteins - YouTube.

13.

PDB-101: Learning Resources: Methods for Determining Structure.
<https://pdb101.rcsb.org/learn/guide-to-understanding-pdb-data/methods-for-determining-structure>.

14.

Protein Three-Dimensional Structure: Levels of Protein Structure, Proteins Motifs, Domains and Databases. <https://proteinstructures.com/structure/protein-domains/>.

15.

Protein Structure | Learn Science at Scitable.

<https://www.nature.com/scitable/topicpage/protein-structure-14122136>.

16.

Introduction to Sequence Alignment and Sequence Analysis.

<https://proteinstrutures.com/sequence/introduction/#:~:text=Introduction%20to%20Protein%20Sequence%20Alignment%20and%20Analysis.%20Amino,meaning%20and%20are%20unable%20to%20extract%20the%20information>.

17.

Introduction to Protein Homology / Comparative Modeling, Step in Homology Modeling.

<https://proteinstrutures.com/structure/introduction/>.

18.

PDB-101: cAMP-dependent Protein Kinase (PKA). <http://pdb101.rcsb.org/motm/152>.

19.

Experimental Methods in Protein Structure Determination: Protein crystallization and Protein Crystallography.

<https://proteinstrutures.com/experimental/experimental-methods/>.

20.

PDB-101: Insulin Receptor. <http://pdb101.rcsb.org/motm/182>.

21.

Lindquist, S. Interview: Protein Folding and Studies of Neurodegenerative Diseases. Journal of Visualized Experiments (2008) doi:10.3791/786.

22.

Induced fit model of enzyme catalysis | Chemical Processes | MCAT | Khan Academy - YouTube.

23.

Enzymes and activation energy | Biomolecules | MCAT | Khan Academy - YouTube.

24.

Introduction to enzymes and catalysis | Chemical Processes | MCAT | Khan Academy - YouTube.

25.

Enzyme Kinetics. <http://www.biology-pages.info/E/EnzymeKinetics.html>.

26.

Enzyme Kinetics - YouTube.

27.

Concepts in Biochemistry - Concept Reviews.

28.

Kevin B. Jones: Why curiosity is the key to science and medicine : TED.com : Free Download & Streaming : Internet Archive. https://archive.org/details/KevinJones_2015X.

29.

Clapham, D. E. Calcium Signaling. *Cell* **131**, 1047–1058 (2007).

30.

PDB-101: Insulin Receptor. <http://pdb101.rcsb.org/motm/182>.

31.

PDB-101: cAMP-dependent Protein Kinase (PKA). <http://pdb101.rcsb.org/motm/152>.

32.

Lemmon, M. A. & Schlessinger, J. Cell Signaling by Receptor Tyrosine Kinases. *Cell* **141**, 1117–1134 (2010).

33.

GPCR | Learn Science at Scitable.
<https://www.nature.com/scitable/topicpage/gpcr-14047471>.

34.

The 2017 Nobel Prize in Physiology or Medicine - Press Release.
https://www.nobelprize.org/nobel_prizes/medicine/laureates/2017/press.html.

35.

Circadian Rhythms, Biological Clock, Chronobiology - Crystalinks.
<http://www.crystalinks.com/biologicalclock.html>.

36.

Second Messengers. http://www.biology-pages.info/S/Second_messengers.html.

37.

Identification of Cyclin-dependent Kinase 1 Specific Phosphorylation Sites by an In Vitro Kinase Assay | Protocol.
<https://www.jove.com/video/57674/identification-cyclin-dependent-kinase-1-specific-phosphorylation>.

38.

Karra, A. S., Stippec, S. & Cobb, M. H. Assaying Protein Kinase Activity with Radiolabeled ATP. *Journal of Visualized Experiments* (2017) doi:10.3791/55504.

39.

PombeNet at The Forsburg Lab - University of Southern California.
<https://dornsife.usc.edu/pombenet/>.

40.

Nurse, P. M. Cyclin Dependent Kinases and Cell Cycle Control. *Bioscience Reports* **22**, 487-499 (2002).

41.

Kevin B. Jones: Why curiosity is the key to science and medicine : TED.com : Free Download & Streaming : Internet Archive. https://archive.org/details/KevinJones_2015X.

42.

LifeSkills | Developing work and life skills. <https://www.barclayslifeskills.com/>.

43.

University of Glasgow - Information for current students - Graduate Attributes.
<http://www.gla.ac.uk/students/attributes/>.

44.

Boyle, J. & Ramsay, S. *Writing for science students*. (Palgrave, 2017).

45.

Restriction Enzyme Digests | Protocol.
<https://www.jove.com/science-education/5070/restriction-enzyme-digests>.

46.

DNA Gel Electrophoresis | Protocol.

<https://www.jove.com/science-education/5057/dna-gel-electrophoresis>.

47.

Bacterial Transformation Using Heat Shock and Competent Cells | Protocol.

<https://www.jove.com/science-education/5059/bacterial-transformation-the-heat-shock-method>.

48.

Separating Protein: SDS-Polyacrylamide Gel Electrophoresis (SDS-PAGE) | Protocol.

<https://ezproxy.lib.gla.ac.uk/login?url=https://www.jove.com/science-education/5058/separating-protein-with-sds-page>.

49.

PCR: The Polymerase Chain Reaction | Protocol.

<https://ezproxy.lib.gla.ac.uk/login?url=https://www.jove.com/science-education/5056/pcr-the-polymerase-chain-reaction>.

50.

PCR. <http://learn.genetics.utah.edu/content/labs/pcr/>.

51.

Gel Electrophoresis. <http://learn.genetics.utah.edu/content/labs/gel/>.