

Genes, Molecules and Cells-2

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

[View Online](#)



Alberts, B. (2008). Molecular biology of the cell (5th ed). Garland Science.

Bacterial Transformation Using Heat Shock and Competent Cells | Protocol. (n.d.).
<https://www.jove.com/science-education/5059/bacterial-transformation-the-heat-shock-method>

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

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

Clapham, D. E. (2007). Calcium Signaling. Cell, 131(6), 1047–1058.
<https://doi.org/10.1016/j.cell.2007.11.028>

Concepts in Biochemistry - Concept Reviews. (n.d.).
https://www.wiley.com/legacy/college/boyer/0470003790/reviews/redox/reduction_potentials.htm

DNA Gel Electrophoresis | Protocol. (n.d.).
<https://www.jove.com/science-education/5057/dna-gel-electrophoresis>

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

Enzyme Kinetics - YouTube. (n.d.).
<https://www.youtube.com/playlist?list=PLbKSbFnKYVY3j6ubaW1zgTXj5C4443v8s>

Enzymes and activation energy | Biomolecules | MCAT | Khan Academy - YouTube. (n.d.).
<https://www.youtube.com/watch?v=j00Ep0Byu0Y>

Experimental Methods in Protein Structure Determination: Protein crystallization and Protein Crystallography. (n.d.).
<https://proteinstructures.com/experimental/experimental-methods/>

Falchi, M., El-Sayed Moustafa, J. S., Takousis, P., Pesce, F., Bonnefond, A., Andersson-Assarsson, J. C., Sudmant, P. H., Dorajoo, R., Al-Shafai, M. N., Bottolo, L., Ozdemir, E., So, H.-C., Davies, R. W., Patrice, A., Dent, R., Mangino, M., Hysi, P. G., Dechaume, A., Huyvaert, M., ... Froguel, P. (2014). Low copy number of the salivary amylase gene predisposes to obesity. Nature Genetics, 46(5), 492–497.
<https://doi.org/10.1038/ng.2939>

Gel Electrophoresis. (n.d.). <http://learn.genetics.utah.edu/content/labs/gel/>

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

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

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

Induced fit model of enzyme catalysis | Chemical Processes | MCAT | Khan Academy - YouTube. (n.d.). <https://www.youtube.com/watch?v=8lUB2sAQkzw>

Interactive Concepts in Biochemistry - Content by Chapter. (n.d.).
https://www.wiley.com/legacy/college/boyer/0470003790/chapter/chapter_list.htm#

Introduction to enzymes and catalysis | Chemical Processes | MCAT | Khan Academy - YouTube. (n.d.). <https://www.youtube.com/watch?v=G7ZAwUdBNFE>

Introduction to Protein Homology / Comparative Modeling, Step in Homology Modeling. (n.d.). <https://proteinstructures.com/structure/introduction/>

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

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

Karra, A. S., Stippec, S., & Cobb, M. H. (2017). Assaying Protein Kinase Activity with Radiolabeled ATP. Journal of Visualized Experiments, 123. <https://doi.org/10.3791/55504>

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

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

Lehninger, A. L., Nelson, D. L., & Cox, M. M. (2013). Lehninger principles of biochemistry (6th ed). W.H. Freeman.

Lemmon, M. A., & Schlessinger, J. (2010). Cell Signaling by Receptor Tyrosine Kinases. Cell, 141(7), 1117-1134. <https://doi.org/10.1016/j.cell.2010.06.011>

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

Lindquist, S. (2008). Interview: Protein Folding and Studies of Neurodegenerative Diseases.

Journal of Visualized Experiments, 17. <https://doi.org/10.3791/786>

Nurse, P. M. (2002). Cyclin Dependent Kinases and Cell Cycle Control. Bioscience Reports, 22(5/6), 487-499. <https://doi.org/10.1023/A:1022017701871>

PCR. (n.d.). <http://learn.genetics.utah.edu/content/labs/pcr/>

PCR: The Polymerase Chain Reaction | Protocol. (n.d.).

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

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

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

PDB-101: Insulin Receptor. (n.d.-a). <http://pdb101.rcsb.org/motm/182>

PDB-101: Insulin Receptor. (n.d.-b). <http://pdb101.rcsb.org/motm/182>

PDB-101: Learning Resources: Methods for Determining Structure. (n.d.).

<https://pdb101.rcsb.org/learn/guide-to-understanding-pdb-data/methods-for-determining-structure>

Perry, G. H., Dominy, N. J., Claw, K. G., Lee, A. S., Fiegler, H., Redon, R., Werner, J., Villanea, F. A., Mountain, J. L., Misra, R., Carter, N. P., Lee, C., & Stone, A. C. (2007). Diet and the evolution of human amylase gene copy number variation. *Nature Genetics*, 39 (10), 1256-1260. <https://doi.org/10.1038/ng2123>

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

Protein Structure | Learn Science at Scitable. (n.d.).

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

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

Proteins - YouTube. (n.d.).

<https://www.youtube.com/playlist?list=PLbKSbFnKYVY0By5uwg3eAmGeuynvGqCQw>

Reece, J. B., & Campbell, N. A. (2011). Campbell biology: Jane B. Reece ... [et al.] (9th ed., Global ed.). Pearson Education.

Regulation of the Lactase Gene | HHMI BioInteractive. (n.d.).

<http://www.hhmi.org/biointeractive/regulation-lactase-gene>

Restriction Enzyme Digests | Protocol. (n.d.).

<https://www.jove.com/science-education/5070/restriction-enzyme-digests>

Second Messengers. (n.d.). http://www.biology-pages.info/S/Second_messengers.html

Separating Protein: SDS-Polyacrylamide Gel Electrophoresis (SDS-PAGE) | Protocol. (n.d.).
<https://ezproxy.lib.gla.ac.uk/login?url=https://www.jove.com/science-education/5058/separating-protein-with-sds-page>

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

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

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

Wyckoff, G. J., Wang, W., & Wu, C.-I. (2000). Rapid evolution of male reproductive genes in the descent of man. *Nature*, 403(6767), 304–309. <https://doi.org/10.1038/35002070>