

# General Sites for Cell Biology

## [BBC News: Cell discovery clues to body clock and beating jet lag](#)

New discoveries into how the body clock works could provide clues to help combat jet lag, research suggests.

## [Kimball's Biology Pages](#)

A comprehensive biology site created and maintained by John W. Kimball, a retired graduate of Harvard College where he taught immunology.

## [Molecular Biology Web Book](#)

A free web book, covering such topics as Cells and viruses, protein structure, DNA and Cell division.

## [NIH: Using technology to study cellular and molecular biology](#)

Using Technology to Study Cellular and Molecular Biology—developed with the the National Center for Research Resources (NCRR)—is a creative, inquiry-based instruction program designed to promote active learning and stimulate student interest in medical topics.

## DNA Replication and Mutation

- [DNA Replication](#) by John Kyrk
- [Karyotype Activities](#) Genetic Science Learning Center
- [DNA Repair](#) Nature

## Transcription and Translation

- [Animation of Transcription](#)
  - [Translation Movie](#) University of Colorado
  - [Protein Translation \(animation\)](#) Robert J. Huskey
  - [Why do fireflies glow?](#) Genetic Science Learning Center
  - [Protein Synthesis](#) WH Freeman & Co. and Sumanas, Inc.
  - [Animation of Translation](#)
  - [Translation Animation](#) Brooks/Cole
  - [Protein Synthesis](#) Wisconsin Online
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# Microscopy

## A Guide to Microscopy and Microanalysis

A comprehensive annotated listing of sites in electron, light, confocal, laser, scanning probe, nuclear magnetic, x-ray microscopy, image analysis, nondestructive evaluation, spectroscopy, surface science.

## Biological Applications of Electron and Light Microscopy

A site devoted to links providing images taken with electron microscopes of insects, worms, plants, cells, and microorganisms.

## Histology

Part of the University of Kansas. Great source of histology slides ranging from cell structure to human physiology.

## History of the Light Microscope

Learn about the history of light microscope from the creation of the first lens to microscopes of the 19th century.

## Images from the Microscope

Explore the world of optical microscopy. Check out the photo gallery and have fun with the virtual microscopy.

## Magnetic Resonance Microscopy

MRM is basically MRI at a microscopic level. MRI can be accomplished at almost any hospital but for acquiring MRM data sets of the type we have worked with, there are only a few facilities world wide. All of our scans have been done at the Duke University Center for In Vivo Microscopy.

## Microscopy-UK

From this home page you can visit image galleries, movies, 3D microscopy, books, projects, join the club and more.

## Mimivirus - Unintelligent Design

With the recent discovery of a truly monstrous virus, scientists are again casting about for how best to characterize these spectral life-forms. The new virus, officially known as Mimivirus (because it mimics a bacterium), is detailed in this Discover article.

## Scanning Electron Microscope

Learn about how scanning electron microscopes work and view the image gallery. There are also teacher resources on using microscopes for in the classroom.

## University of Delaware - Histology

Mammalian Histology at the University of Delaware is taught at a comprehensive level and concentrates heavily on human tissues and organ systems. A sizeable collection of color light microscopic images as well as black and white electron microscopic images have been archived and can be accessed by links with this home page.

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# Cell Structure and Transport

## Animal Cells

Part of J Kimball's website, this page looks at the organelles present in animal cells.

## Aquaporins

Information on Aquaporins from the Biomedical Hypertext site.

## Cell Breakage and Fractionation

Part of the Access Excellence site, uses diagrams to explain the process of cell fractionation.

## CELLS alive!

Investigate many aspects of cellular biology: how cells move, how a lymphocyte kills cells, cell sizes compared, cellular chemotaxis, cell suicide and more.

## Nanoworld

From this home page explore many aspects of cellular biology. Enter the image gallery to view images of cells and cell structures or investigate the use and application of electron microscopy through the TEM and SEM pages.

## The Virtual Cell

This allows you to cut into a 'virtual plant cell' in real time and view its internal structure. A worthwhile visit. Includes electron micrographs of plant cell structures. Includes a movie of ATP synthesis in the chloroplast.

## Transport in and out of Cells

Learn about cellular transport with these excellent diagrams. Well worth a look.

### Cellular Transport (Animations And Movies)

- [Osmosis Examples](#)
- [Passive and Active Transport](#) from Northland Community and Technical College
- [Endocytosis of an LDL](#)
- [Passive Transport: Filtration and Facilitated Diffusion](#)
- [Passive Transport: Diffusion](#) Wisconsin Online
- [Passive Transport: Osmosis](#) Wisconsin Online
- [Transport Processes Requiring ATP](#) Wisconsin Online

### Cellular Structure and Function (Animations And Movies)

- [Flash animations of Biological Processes](#) by John L. Giannini
- [Stem Cells](#) Sumanas Inc.
- [Various Cellular Animations](#) University of Alberta
- [Inside a Cell](#)
- [Cellular Animations](#) by Donald F. Sligh
- [Flagella and Cilia](#) from Northland Community and Technical College
- [Identifying Eukaryotic Animal Cell Organelles](#) Wisconsin Online