



Online microscopy and histology resources

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La Jolla Institute Microscopy Core



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ABSTRACT

There is a wealth of microscopy-related information online. This document lists the ones we know and like. Click on the document tab to see the list!

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Document body

Microscopy theory and practice:

iBiology Microscopy Course

<https://www.ibiology.org/ibioeducation/taking-courses/ibiology-microscopy-course.html>

Fourier transformation explained by 3Blue1Brown

<https://www.youtube.com/watch?v=spUNpyF58BY>

Vendor websites with lots of information about microscopy

<https://www.microscopyu.com/>

<http://zeiss-campus.magnet.fsu.edu/>

<https://www.leica-microsystems.com/science-lab/>

Spectra viewers

<http://www.nightsea.com/sfa-sharing/fluorescence-spectra-viewers/>

Powerful spectra database of fluorescent proteins and probes by Talley Lambert

<https://www.fpbases.org/>

Image analysis:

Quantifying microscopy images: top 10 tips for image acquisition by Anne Carpenter

<https://blog.cellprofiler.org/2017/06/15/quantifying-microscopy-images-top-10-tips-for-image-acquisition/>

Analyzing fluorescence microscopy images with ImageJ by Pete Bankhead

<https://petebankhead.gitbooks.io/imagej-intro/content/>

Image analysis forum for ImageJ, Fiji, CellProfiler, KNIME, Icy, Ilastik, scikit-image, and friends

<https://forum.image.sc>

Image analysis forum for QuPath

<https://groups.google.com/forum/#!forum/qupath-users>

QuPath tutorials

<https://www.youtube.com/channel/UCqepVnS1QsB7B8nBA9T91EQ/playlists>

Fiji manual with tutorials by Cameron J. Nowell

<https://cloudstor.aarnet.edu.au/plus/index.php/s/bxRU7kkoj2rljCh#pdfviewer> - manual

<https://cloudstor.aarnet.edu.au/plus/index.php/s/xdwcNFp0kafaNNN> - tutorial data

Immunolabeling:

Search for well-referenced antibodies

<https://www.citeab.com/>

Open access, online antibody tool

<https://www.antibodypedia.com>

Machine learning-based antibody search

<https://www.benchsci.com/>

Constantly improving panel of validated human antibodies used in clinical trials

<http://www.nordiqc.org/>

Antibody performance following fixation

<https://www.thermofisher.com/us/en/home/life-science/cell-analysis/cell-analysis-learning-center/cell-analysis-resource-library/ebioscience-resources/antibody-fixation-considerations.html>

Learn more about tissue markers with Protein Atlas

<https://www.proteinatlas.org/humanproteome/tissue+specific>

Cell-type specific markers

<http://www.antibodybeyond.com/reviews/cell-marker-reviews.htm>

General cell and tissue staining protocols

<https://www.cellsignal.com/contents/resources/protocols/resources-protocols>

Histology:

Excellent guide on proper murine tissue trimming

<https://reni.item.fraunhofer.de/reni/trimming/>

Great explanation of HE stain optimization

<https://www.youtube.com/watch?v=n8VeoXDBDyA>

Histology of a normal human lymph node (+IHC)

<https://www.youtube.com/watch?v=RHFzxY4ZeYk>

Normal skin histology

<https://www.youtube.com/watch?v=yQQ2Dmz42Vs>

Immunohistochemistry in normal skin

<https://www.youtube.com/watch?v=rNbWCTNUuqg>

<https://www.youtube.com/watch?v=4Emlkh010uw>

Medical School Pathology by John R. Minarcik, MD

https://www.youtube.com/watch?v=SK89_DNoA5Q&list=PL3oAYNQ024sijkTwlmK4MliyV1Nmv2xZX&index=1

Online course - Histology: Using Microscopy to Study Anatomy and Identify Disease

Start dates 7 January 2019 and 15 July 2019

<https://www.futurelearn.com/courses/histology>

A practical guide to the histology of the mouse

<http://www.wiley.com/WileyCDA/WileyTitle/productCd-1119941202.html>

Data analysis and visualization:

Statistics for biologists

<https://www.nature.com/collections/gqhhqm>

Make a difference: the alternative for p-values

<http://thenode.biologists.com/quantification-of-differences-as-alternative-for-p-values/research/>

Plots of data by Marten Postma and Joachim Goedhart

<https://huygens.science.uva.nl/PlotsOfData/>

Getting Started in R by Saghir Basjir and Dirk Eddelbuettel

<https://github.com/eddelbuettel/gsir-te>

Colour schemes and templates, color-blind friendly - excellent resource by Paul Tol

<https://personal.sron.nl/~pault/>

Tools:

Handbrake - open source video transcoder

<https://handbrake.fr/downloads.php>

XnView - free photo viewer, image resizer, batch converter

<https://www.xnview.com>

VLC media player - open source video player

<https://www.videolan.org/vlc/index.html>



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