

# The Medical Educator's Resource Guide

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In a previous issue of the Resource Guide (Vol. 12 #1, 2002), two examples illustrated how websites can be linked to and incorporated into a lecture in real time. The incorporation of digitized web-based images into Microsoft® PowerPoint® presentations is another strategy for using the Internet for instructional purposes.

The Internet is a rich source of images for lecture. At my institution several professors of histology routinely find histological images on the web that are used to complement their lectures. In addition to using web-based images for lecture, one instructor provides her students with the URL for each image that she uses. In doing so, students can go directly to the source of the image to study their lecture notes along with the images that were used in class.

If you peruse websites that are posted for courses on the Internet, you'll see that some instructors do much the same thing by providing students with a list of hyperlinked sites that are related in some way to the courses they teach. Students of histology at our institution, for example, are encouraged to use sites that are listed on our course resource page for self-assessment. Indeed, many of the sites have quiz options that students use with enthusiasm in preparation for examinations. Even without a formal method of assessment, sites that are content rich can be used for self-study and review.

In many instances, if you examine the copyright notice you may discover that the copyright holder for the site welcomes the use of their images. Often times, there is a clear statement that images may be used for noncommercial educational purposes. Be cautious though because some sites may be more restrictive. If there is any question regarding what you can or cannot do, you should contact the copyright holder and author for the appropriate permissions. If you plan to link to a site, you should also ask the copyright holder and author for permission to do so.

The Internet is a source of information for subjects that are taught by medical educators. However, the variety and unevenness of website construction can be perplexing when thinking about how to use websites in the basic science courses that we teach. The role of the Resource Guide is to identify websites that will be most useful to educators. If you have used on-line materials in your class, please consider sharing your experience with our readers by submitting a review of the website or sites that you are using to The Medical Educator's Resource Guide. Send all submissions to [jrcotter@buffalo.edu](mailto:jrcotter@buffalo.edu) or use the IAMSE web page at [http://www.iamse.org/pub/bse\\_resource.htm](http://www.iamse.org/pub/bse_resource.htm). Please include the URL and a short critique of between 100 and 200 words.

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## **Malaria: An On-line Resource. Royal Perth Hospital.** <http://www.rph.wa.gov.au/labs/haem/malaria/index.html>

This site, created by the Division of Laboratory Medicine at Royal Perth Hospital in Australia, is designed for physicians and diagnostic laboratory personnel. Information at the site is current (2002-2003) and goes beyond what is found in a general medical microbiology textbook. Hot button topics include "History", "Diagnosis", "Prophylaxis", "Treatment", "Teach and Test", and "Links". To navigate the site as a student, start with "History" to obtain background information including the life cycle and epidemiology of the parasites, and basic information about prophylaxis and treatment. The clinical information regarding prophylaxis and treatment includes dosage information and is more appropriate for physicians. The "Diagnosis" section includes a description of the dipstick test for malaria, which, while used in Australia and other countries, is not yet licensed in the US. The extensive "Teach and Test" section is a very useful tool for learning to distinguish malarial parasites on blood smears. The user views a smear, accompanied by a short case history, to determine which

species of parasite, if any, is involved. Correct and incorrect answers are explained, and key diagnostic features are emphasized. Links include WHO, CDC, and several other sites. (*Reviewed by Bonnie Buxton, Ph.D., University of Health Sciences- College of Osteopathic Medicine, Kansas City.*)

## **Medical Microbiology. Neal Chamberlain, Kirksville College of Osteopathic Medicine.**

<http://www.kcom.edu/faculty/chamberlain/>

This is an excellent Web resource in medical microbiology. It is designed for a specific course but would be useful for faculty or students involved in similar courses at other institutions. The major focus is the course lectures and a laboratory exercise (cultivation and identification of bacteria), but there are abundant links to CDC information, e.g., notifiable diseases and immunization schedules; image libraries; and news sites. A lot of the material such as common causes of various diseases and infectious disease names and their etiologies can be downloaded to a PDA. There is also an exhaustive list of the microorganisms that

can cause specific types of infection, e.g., pneumonia and sexually transmitted diseases. Another nice feature is "Clinical Cases on the Web," which contains cases developed at KCOM and links to cases at many other sites. This site is outstanding but would be further strengthened by the addition of a section with practice questions for students. (Reviewed by Dixie D. Whitt, Ph.D., University of Illinois College of Medicine at Urbana-Champaign.)

**Medical Mycology. The University of Wisconsin.**

<http://www.medmicro.wisc.edu/Resources/ImageLib/Mycology/index.html>

This site is extremely useful for teachers, clinical microbiologists, undergraduates, and graduate students in different fields who are studying medical microbiology. It is divided into two sections: "Mycology Image Library" and "Diagnostic Key". In the latter, organisms are presented in three sections: a) Yeast and yeast like organisms, b) Molds, and c) Other selected images. Important diagnostic features of yeast, molds and dermatophytes such as pseudohyphae, blastoconidia, and chlamydoconidia, and septate and non-septate hyphae, as well as ectothrix and endothrix hair infections are highlighted. Tissue and mold forms of dimorphic fungi are clearly presented. The site uses different diagnostic stains and preparations to illustrate the organisms: gram staining, KOH preparations and histological preparations. Human and animal clinical images of infections are also shown. This site is interesting in its layout. It is concise, focused and easy to navigate. (Reviewed by Musau WaKabongo, Ph.D., Des Moines University - Osteopathic Medical Center, Des Moines, IA.)

**Microbes.info. The Microbiology Information Portal.**

<http://www.microbes.info/index.html>

As its name implies, this site is basically a comprehensive web portal with links to other microbiology related sites. Sites need to be carefully chosen, especially by students, since many of the links are for the general public. For medical students and professional medical microbiologists, the most useful links are listed in the "Medical Microbiology" section under "Resources". This opens additional categories, including "Diseases and Conditions", with more than 90 additional categories and additional links. There is a search utility that might help with navigating the site more quickly; however, it must be used carefully. For example, typing in "pertussis +toxin", as per the instructions, retrieves a fungi site as the best match, but "pertussis toxin" results in more specific sites. The search utility does not search the Web. For professionals, a similar search using Google, Kartoo, or Scirus is more useful. (Reviewed S.

James Booth, Ph.D., University of Nebraska Medical Center, Omaha, NE.)

**Renal Pathology Tutorial. J. Charles Jennette, University of North Carolina at Chapel Hill**

<http://www.gamewood.net/rnet/renalpath/tutorial.htm>

This site is an instructive review of some of the aspects of renal disease and pathology. It includes the normal histology of the glomerulus, clinical presentation of glomerular disease, and a brief synopsis of a few of the glomerular diseases (minimal change disease, focal segmental glomerulosclerosis, membranous nephropathy, and membranoproliferative glomerulonephritis types I and II). The text is concise and informative. Incorporated into the text are diagrams and light microscopic, immunofluorescence and electron microscopic images. The images are clear and well explained. One drawback is that some of the images are not available for viewing. The site is linked to case studies (six) which provide clinical history, photomicrographs, pathologic diagnosis and in depth discussion. The site is still under construction with future segments highlighting diseases associated with the nephritic syndrome, renal vascular disease, tubulointerstitial diseases, transplant pathology, and renal neoplasms. This site is recommended for medical students and pathology residents. It is a useful and very good resource. (Reviewed by Barbara K. Stefanick, M.D., Kaleida Health, State University of New York at Buffalo, Buffalo, N Y.)

**The World of Parasites. James Smith. McGill University**

<http://martin.parasitology.mcgill.ca/jimspage/worldof.htm>

This site is a great resource for educators, students and lay people. A map of the world is the gateway through which the user is introduced to the subject of parasitic infections. A list of parasites from each part of the world, the name of the disease associated with the parasite, and its occurrence and mortality are displayed by selecting a region or country from the map. More information about a parasite is provided by selecting one of the parasites from the list. For example, when *Onchocerca volvulus* is selected, one is given a description of the disease; its severity, economic impact, and manner of transmission; a description of the adult worm; and a picture of the fly that is responsible for transmitting the parasite. The *World of Parasites* is simple, easy to navigate and well constructed. There are also a number of Internet links that the user may find useful. (Reviewed by Musau Wakabongo, Ph.D., Des Moines University Osteopathic Medical Center, Des Moines, IA.)