Electronic Media Review

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Image Atlas Series
inQUIZator Series
Indiana Pathology Images; 2004, 2005
http://www.ipimages.com

INDEX TERMS: clinical microbiology; electronic images; learning tools; review.

Each of the following five CD-ROMs is described to be for the express use of: educators (PowerPoint lectures, color images for examinations, student laboratory manuals, intranet website postings); undergraduate, graduate, and medical students, residents, and fellows (intranet postings for review of lecture material, at-home review, printed 'flash cards' for national certification examination review); and practitioners (reference material, review material for continuing education credit, training and retraining of employees, images for laboratory procedure manuals).

IMAGE ATLAS SERIES

Bacteriology Image Atlas

This CD-ROM contains nearly 700 quality photomicrographs. Each is clear and accessible. "Alphabetical", "Grouping", and "Tests" tabs allow the seamless movement from one way of searching to another. This reviewer ran the software through a Macintosh (Mac) SX environment and a Windows XP environment. While the Mac access was a bit more intuitive, both worked well. Indiana Pathology Images (IP) suggests that the CD has been designed to operate in MAC OSX v. 10.2-10.3 and Windows 95, 98, NT, 2000, and XP. There is also an Internet Explorer (5.0 and up) and Netscape operation. The operational modes are "RUN from CD-ROM", simple for both environments, and "Internet RUN" which is optimal from PC environments only. It is not clear why this limitation exists.

The content is superb! Images exist for over 125 different organisms ranging from *Achromobacter xylosoxidans* to *Yersinia enterocolitica*. Commonly identified organisms such as the *Enterobacteriaceae* are balanced with views of less frequently seen organisms such as *Finegoldia magna* and *Mycobacterium phlei*.

When you go to an organism, there are usually crystal-clear macroscopic and microscopic levels of images of that organism to see. In addition, depending on the organism there are likely to be 100mm petri dish views of the organism on appropriately different media. Close-up and/or stereoscopic views are included for many isolates. Stereoscopic examination of anaerobic organisms is most useful in this level of visual recognition and the authors appear to have chosen this magnification as the opening image for viewing all anaerobe isolates. The photographed isolates all appear to have been incubated until colony morphology was well established.

When the organisms are grouped, they end up in these categories: aerobes: Gram negative cocci (GNC), four subcategories of Gram negative rods (GNR); anaerobes: GNC, GNR, GPC, GPR, and GPR, spore-forming; and mycobacteria. The term "rods", which while common, is still not correct and this reviewer hopes that in the later versions (Bacteriology II, etc.) this will be corrected to "B" (bacilli).

There is also a category for tests in the following categories: biochemical and other tests, aerobes, anaerobes, mycobacteria, and susceptibilities. There are over 80 tests in the aerobes category alone, ranging from Bacitracin susceptibility to XV factor requirement(s). There are four versions of motility testing. Each has an appropriately photographed representation of POS and (in many cases) NEG versions of the test at hand.

Parasitology Image Atlas

This CD-ROM contains over 600 quality photomicrographs. Each is clear and accessible. "Classification" and "Grouping" tabs allow the seamless movement from one way of searching to another. This reviewer ran the software through a Mac OSX environment and a Windows XP environment. While the Mac access was a bit more intuitive, both worked well. IP suggests that the CD has been designed to operate in Mac OSX v. 10.2-10.3 and Windows 95, 98, NT, 2000, and XP. There is also an Internet Explorer (5.0 and up) operation. The operational modes are "RUN from CD-ROM", simple for both environments, and "Internet RUN" which is optimal from PC environments only. It is not clear why this limitation exists.

Again the content is superb!! Images exist for over sixty organisms ranging from *Acanthamoeba* species to *Wuchereria bancrofti*. The images can be searched in categories entitled arthropods, cestodes, nematodes, protozoa, pseudoparasites, and trematodes

Each image typically has various magnifications (x 100, 500, 1,000, etc.) as appropriate, as well as the organism viewed in various stains (Giemsa, Trichrome, wet prep, H&E, etc.) as appropriate and various stages (ovum, trophozoite, adult, microfilaria) as appropriate.

Mycology Image Atlas
This CD-ROM contains over 600 quality photomicrographs. Each is clear and accessible. "Classification" and "Grouping" tabs allow the seamless movement from one way of searching to another. This reviewer ran the software through a Mac OSX environment and a Windows XP environment. While the Mac access was a bit more intuitive, both worked well. IP suggests that the CD has been designed to operate in MAC OSX v. 10.2-10.3 and Windows 95, 98, NT, 2000 and XP. There is also an Internet Explorer (5.0 and up) operation. The operational modes are "RUN from CD-ROM", simple for both environments, and "Internet RUN" which is optimal from PC environments only. It is not clear why this limitation exists.

The content is the same quality as the other sections. Images exist for over 75 organisms ranging from *Absidia* species to *Ulocladium* species. The images can be searched in the following categories: algae, dematiaceous fungi, dermatophytes, dimorphic fungi, filamentous bacteria, hyaline fungi, pneumocystis, yeast and yeast-like organisms, and the zygomycetes. Each image typically has various magnifications (x 100, 400, 1,000, etc.) as appropriate, as well as the organism viewed after various stains (LPCB, GMS, H&E, etc.) as appropriate. The images also typically include various views (obverse, reverse) as appropriate and as grown on various media (SDA, PDA, BHI, CMA, etc.) as appropriate.

INQUIZATOR SERIES
inQUIZator: Mycology
Containing a review bank, self-test, and laboratory competency test, this CD-ROM does not operate in a Mac environment at all. No explanation for this shortfall is available.

Choices can be made for classification, chapter headings (lab procedures, identification, habitat, etc.), or alphabetical listing by organism name. The review module also offers a randomized self-test. The competency test module allows the user to take a randomized test selected from a bank of questions with images that will assess the user's ability to identify parasites. After completion of the self-test or competency test, a certificate can be printed that includes the user's name, date, and test results. This certificate can be used to document competency for laboratory personnel or students (and presumably other health care professionals as well).

inQUIZator: Parasitology
Containing a review bank, self-test, and Laboratory Competency test, this CD-ROM does not operate in a MAC environment at all. No explanation for this shortfall is available.

Choices can be made for Classification, Chapter headings (lab procedures, identification, habitat, etc.), or Alphabetical listing by organism name. The review module also offers a randomized self-test. The competency test module allows the user to take a randomized test selected from a bank of questions with images that will assess the user's ability to identify parasites. After completion of the self-test or competency test, a certificate can be printed that includes the user's name, date, and test results. This certificate can be used to document competency for laboratory personnel or students (and presumably other health care professionals as well).

SUMMARY
All in all, these products represent by scope, quality, and with the exception of the inQUIZator items, ease of use major resources for clinical laboratory professionals needing to illustrate microorganisms. The Indiana Pathology Images web site (www.ipimages.com) suggests future titles will include the following.

Image Atlas Series: *Anaerobe Morphology; Cytology; Hematology; Histology; Infectious Disease Pathology; Renal Pathology; Virology.*

inQuizator Series: *Bacteriology; Cytology; Histology.*

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