Software reviews

a "histology hint" or a "clinical pathological correlation," but the information in the latter two items often overlaps that given in the "findings" section. The "histology hint" sometimes presents information of questionable value (e.g., "The capillaries contain red blood cells"), and at other times describes features not seen in the image. The "clinical pathological correlation" in some cases simply presents functional implications of a given structural feature, and in one case contained an inappropriate attempt at humor ("The thymus is the 'schoolhouse' where thymocytes, studying to be T cells, learn the self/non-self discrimination. Those who fail are killed. By comparison, medical school is not so bad.").

While this collection of images represents a fairly comprehensive sampling of normal human tissues and organs, there are no images representing cell structure, blood and hematopoiesis, or special senses. Some sections also lack images of major organs, including the larynx, ureter, penis, and vagina. In contrast, other sections show multiple views of the same tissue or organ (e.g., skeletal muscle, ground bone); and in a few cases the same images are shown in two different sections (e.g., myocardium, smooth muscle). The images are fairly well organized into separate tissue and organ system sections; however, the order of the sections is unusual, e.g., "Circulatory System and Heart," "Endocrine System," "Digestive System," "Lymphoid Tissue." Only two basic tissues, epithelial tissue and connective tissue, are listed under the heading "Tissues" (on a rather confusing submenu called "Big Picture"), while "Bone/Cartilage" and "Muscle" are inexplicably placed together as a group with the organ systems. Each section begins with a useful overview, which lists all of the images in the section. However, the image titles contain frequent errors and inconsistencies (e.g., the titles in the overview are often different from those on the individual image screens). The use of icons to represent organ systems is helpful, although some of the icons are difficult to recognize.

MedPics/Histology is a very useful tutorial or review tool for students of histology. The main strengths of the software are the high quality light microscopic images and interactive feature identification. The images provide an excellent means of self-testing, particularly when used in Quiz Mode. Potential improvements to the program would be the addition of a general index, to allow for rapid navigation to specific images; the ability to generate a random set of images from multiple organ systems for self-testing; a zoom mode for enlarging images; and a split-screen mode permitting comparison of images.

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ProCite for Windows (version 3.1), Biblio-Link II (version 1.1). Personal Bibliographic Software, Inc., P.O. Box 4250, Ann Arbor, MI 48106-4250; 313/996-1580. $345.00 for ProCite; $395.00 for ProCite with Biblio-Link II. Standard educational discount: 50% of the list price. System requirements: Microsoft Windows 3.1 or higher.

ProCite for Windows, version 3.1, is the most recent iteration of a popular bibliographic management program from Personal Bibliographic Software, Incorporated (PBS). The program is essentially a tool for organizing and manipulating collections of references ("records") within a database. Broadly speaking, ProCite can be used by anyone interested in keeping track of bibliographic entities, whether reprints of articles in a file cabinet, or records downloaded from an online database like MEDLINE. When used in conjunction with the PBS data transfer module, Biblio-Link II (version 1.1), ProCite can take downloaded citations from any of a wide range of online and CD-ROM databases and transfer them directly into a ProCite database. Other features of the program include the ability to format bibliographies according to an editorial style, e.g., ALA, Turabian, Science, Nature, etc.; a utility for generating formatted lists of citations from manuscripts; extensive "customizability"; elaborate database search capabilities; a list of more than two dozen "workforms" (templates for a particular type of record, e.g., books, journal articles, conference proceedings); and the ability to incorporate large blocks of text into individual records.

Two manuals come with ProCite: the User Guide, containing information on basic program features, and the Reference Guide, providing instructions on customization of ProCite. Biblio-Link II comes with a separate manual. The manuals are quite satisfactory, with numerous examples and concise instructions. Installation of ProCite and Biblio-Link is quick and easy. Program response time on a 486/33 megahertz PC is generally adequate. ProCite requires a minimum of four megabytes of RAM, although eight megabytes is preferred. Biblio-Link requires eight megabytes of RAM.

ProCite's initial viewing interface, Quick Search, is markedly different from the record viewing interfaces of other bibliographic management programs, e.g., Ref-
ference Manager for Windows [1] and EndNote Plus II for Windows [2]. Three windows are presented simultaneously: the top left window provides options for displaying database records and fields within those records; the bottom window displays the records in a slightly abbreviated format; the upper right window displays selected elements of the records (e.g., authors, titles, keywords). Unfortunately, the three windows compete annoyingly with one another for the attention of the user. The upper left and right windows, which basically work to display selected elements within a record, could be incorporated into pull-down menus, with the possible exceptions of the important “All Records” and “Marked Records” display options. This would allow the abbreviated-record-list window—probably the most important of the three—to be moved up to an area of greater prominence.

The search options available in ProCite are extensive. These include Boolean and range operators (“AND,” “OR,” “greater than” “>”, “less than” “<”, “equal to” “=”, etc.), truncation, field searching (everything from “title” to “subsidary author”), and the ability to save search sets. The search template itself is rather cluttered with a profusion of buttons and windows. The method for creating a search expression is, at least initially, not at all intuitive, necessitating careful reading of the documentation (always a good idea, of course, but rarely undertaken by busy clinicians and researchers). Several other programs, in particular EndNote Plus II, provide search templates which seem far clearer than that of ProCite.

An attractive feature of ProCite, though perhaps not a critical one for most health sciences researchers and clinicians, is the ability of the program to incorporate large blocks of text within an individual record, up to 32,000 characters per field (approximately sixteen pages). This was a particularly useful feature for a UC San Diego history professor interested in incorporating the full text of several seventeenth century sermons into a database; ProCite met her needs perfectly. Equally impressive is the fact that ProCite can maintain databases of up to 100,000 records.

Another impressive feature of ProCite is its “customizability.” For example, ProCite allows the creation of a “workform” (that is, a template for a particular kind of record, e.g., a book, sermon, etc.). This is particularly useful when creating records for less traditional items, such as World Wide Web sites or even e-mail messages. In addition, ProCite’s data transfer module, Biblio-Link II, can be customized to import citations downloaded from new online and CD-ROM databases for which PBS has yet to create an import filter, known as a “configuration file.”

Moving references from online or CD-ROM databases into ProCite is accomplished either with the “import” feature within ProCite, or with an add-on module called Biblio-Link II (version 1.1 as of this writing). The import feature that accompanies ProCite works only with those databases that provide an option for downloading in the generic ProCite format. For example, Innovative Interfaces INNOPAC (a popular turnkey public access catalog), version 7.0+, provides an option for downloading its citations in the generic ProCite format; Biblio-Link II is not needed. For those databases without the ProCite export feature, however, Biblio-Link II is a necessity. After the source of the downloaded citations has been specified (e.g., SilverPlatter/MEDLINE), Biblio-Link II will take the citations and integrate them into a specified ProCite database. Unlike the “Capture” feature available with Reference Manager for Windows, which essentially does the same thing, the module is separate from the main program. This means that two programs must be run simultaneously; this is inconvenient compared to Reference Manager’s more integrated package.

One of the more compelling reasons for purchasing a bibliographic management program is to print bibliographies or citation lists quickly and efficiently in the format required by a particular journal. Although ProCite contains more than a dozen style filters, called “output styles,” the program lacks the convenient (and enormous) journal style lists of EndNote and Reference Manager. In Reference Manager, for example, to format a bibliography in the style required by, say, the Journal of Investigative Medicine, a user can simply select “J.CLIN.INVEST” from the pull-down journal style menu. For researchers in the health sciences, who are always scrambling to locate instructions to authors (for style guidelines, etc.), having access to a one-stop option for journal style formatting is a significant advantage over having to choose from a less comprehensive list of predominantly, though not exclusively, generic style filters. Nevertheless, the ease with which ProCite bibliographies can be created and downloaded, to either a printer or a disk, greatly enhances the program’s attractiveness.

The ability to scan a word-processed manuscript and then to build a citation list from in-text references is yet another important feature of programs like ProCite. PBS has designed a utility that greatly simplifies this procedure by allowing ProCite to be integrated within Microsoft Word for Windows. Efforts to allow similar integration into other Windows-
based word processing programs are under way. However, users of
DOS-based word processing programs will not be able to take ad-
vantage of ProCite’s document scanning ability. I was startled to
find that ProCite for Windows could not scan my DOS Word-
Perfect manuscript, clearly a consid-
eration for anyone contemplating upgrading from the DOS to the
Windows version of ProCite.

In the past, the relatively high cost of ProCite made it less attrac-
tive than many other bibliograph-
ic management programs. Cur-
cently, however, the price of ProCite, particularly if purchased
with an educational discount, com-
pares very favorably to that of Ref-
ence Manager and EndNote. The
standard educational discount now
runs about 50% of the list price, a
substantial savings.

Is ProCite for Windows the best
bibliographic management pro-
gram for a health care profession-
al? Some of its strengths: the pro-
gram is relatively inexpensive,
even with Biblio-Links II; ProCite
databases can handle huge num-
ers of records, up to 100,000 per
database; individual records can
hold up to sixteen pages of text;
bibliographies (journal style lists
notwithstanding—see above) are
easy to generate; many of the pro-
gram’s features can be customized;
and formatted bibliographies can
be previewed prior to printing in
a WYSIWYG (“what-you-see-is-
what-you-get”) format. Some of its
weaknesses: a lack of a compre-
hensive, pull-down “laundry-list”
of journal styles; a less-than-intu-
titive viewing and searching inter-
face; a lack of total integration be-
tween Biblio-Link II and ProCite;
and an inability to scan certain
DOS-based word processed manu-
scripts. Researchers and clinicians
will probably prefer the user-
friendliness of programs like Ref-
ence Manager and EndNote Plus II
over ProCite, though the power
and bargain price of ProCite are
certainly compelling.

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References

1. Reference Manager for Windows.
2. EndNote Plus II for Windows.