WWW GUIDE

Thermocycling on the Web: A user's guide

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Imagine walking into the world's largest library, stepping up to the card catalog, and finding that it consisted of scraps of paper containing the first paragraph of every document in the library. To find the information you are after, you have to guess what keyword will be contained in the first paragraph of the document you suppose the library is holding. Since the documents are constantly being updated, and their locations also move, the only way to find what you are after is to go to the general location of all the documents that have a specific keyword you are

looking for, and then open them one by one.

If this sounds complicated, then you have an inkling of what researchers are up against when they try to find specific information on the World Wide Web. Since there is no road map to the type or quality of information available on the Web, searching is a hit or miss proposition. If you are lucky, you can find exactly what you are after in a few keystrokes, but if the topic does not lend itself to highly specific keywords that a search engine can find—in the first few paragraphs of a Web page—then you may be in for a highly frustrating experience.

A quick search on the term "PCR" is a case in point. Searching with a typical search engine will generate over 600 different documents. Which ones are accurate, up-to-date, and contain the information you need?

As MDs doing research, we were doubly

frustrated by this problem: We wanted the latest medical information for treating our patients (*Science* 270:16-17, 1995), as well as the most up-to-the-minute information on our specific areas of research. Although the Web seemed to be the obvious place to get this type of data, we did not have the hours it would require to search through each site to find these gems. In an effort to make biomedical information accessible quickly, we developed a search software that we call MIRIAD, which enables rapid filtering for all documents available on the Web on a specific topic [Ed.: contact authors for additional information]. The table below gives one search result. Of 600 documents found, these 10 sites were filtered for high-quality information on PCR. These sites should help you get your bearings for ferreting out the specific PCR information you are after.

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PCR PRODUCT AND SERVICES SITES

Page Name	URL	Comments
PCR reagents/instruments	http://www.perkin-elmer.com/abd/pcr/	Has a nice frequently asked questions section
LA PCR	http://www.panvera.com/webpages/laguide.html	A good reference for long-range PCR
p8-10.pdf	http://biochem.boehringer.com/prod_int/manuals/pcr_man/p8-10.pdf	A general manual for standard PCR techniques
Long PCR reagents	http://twod.med.harvard.edu/labgc/estep/longPCR_protocol.html	A protocol for long PCR from the laboratory of George Church at Harvard Medical School
Suppliers of PCR products	http://www.the-scientist.library.upenn.edu/yr1996/feb/pcr_960205.html	A good review of products available for PCR
PCR <i>in situ</i>	http://lenti.med.umn.edu/insitu_pcr/chap-shoot2.fm.html	A good description of <i>in situ</i> PCR
Primer selection	http://alces.med.umn.edu/webprimers.html	A program to aid in selecting PCR primers from the University of Minnesota
PRIMER	http://www.csc.fi/molbio/progs/primer/manual.html	A program to help in selecting PCR Primers from the MIT Genome Center
Molecular biology techniques	http://research.nwfsc.noaa.gov/protocols/methods/methods.html	A forum for exchanging PCR techniques
Protocols on the WWW	http://www.ifrn.bbsrc.ac.uk/gm/lab/docs/protocols.html	A hotlist of molecular biology techniques

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