MODULE 4 How to use PubMed

Part 4 – Preview/Index, History, combining search sets, Accessing full text articles and restricting results to the HINARI subset of journals.

Instructions

This part of the course is a PowerPoint demonstration intended to show a guided tour of the PubMed interface.

This part of the module is off-line and intended as an information resource for reference use.

This part of the module should be taken before using the live tutorial on the PubMed and does not required a HINARI training password.
Before logging into PubMed we can Log In to the HINARI website using the URL http://www.healthinternetwork.org
You will need to insert your HINARI User ID and password in the Log In box and click on the “Sign On” Icon.
From the main HINARI webpage you can access PubMed from the “Find articles” link in the body of the webpage. Click on Search for articles through PubMed (Medline).
Click on the Preview/Index link below the query box on the main PubMed page.
Preview will show the last three search terms and the results with set numbers indicated by the # symbol.
Index allows you to query the PubMed database and see all the occurrences of a term and the number of records in the database.
In this example we will query the index for the term “Zimbabwe”. Click on the “Index” button.
Results of the Index query are displayed in the box. Each occurrence of the term is listed with the number of articles listed in parentheses.
To select from the list click on each term as required. To make multiple selections hold down the Ctrl key. Following selection from the list click on the AND, OR, NOT button to send the term to the main PubMed query box.
For the example we have chosen “Zimbabwe/Epidemiology(672)” from the index list.
Click on “Go” and we see that we now have 672 articles with “Zimbabwe/epidemiology” in the record.
PubMed allows users to view previous searches through the “History” page. To access the History page, click on the History link on the bar below the main PubMed query box.
To build a search using History begin by putting in your broadest search term. In this example we will use “public health” as our main concept.
The result for the public health search is 2814155 articles. These can be viewed as a search set by clicking on the “History” link.
On the History page our first set is given a set number identified by the # symbol, in this example it is #1. On the right hand side of the page the number of articles is shown under the “Result” column.
We can now search for “malaria” as a second search term from within the query box on the History page.
As in the previous result the malaria search can also be viewed by returning to the History page.
The malaria search has now been given a set number #2. The number of articles in the set is shown on the right-hand side of the page.
To combine “public health” with “malaria” we can use the set numbers. To combine using “AND” enter the search statement “#1 AND #2”
We now have 12141 articles with the concepts “public health” AND “malaria”, click on the link to return to “History”.
Our search “#1 AND #2” is now identified as #3
We can narrow our search down further by combining our #3 (public health and malaria) with “Africa”.
The search has narrowed the results down further to 3944. Click on the link to return to the History page.
Set #4 is now “public health AND malaria AND Africa”
To clear the history click on “Clear History”
If we enter the search “chloroquine resistance in Africa”
Here the results default to the "Summary" display.
Change the display to “Abstract” from the dropdown menu.
Dissecting the loci of low-level quinine resistance in malaria parasites.

Ferdig MT, Cooper RA, Mu J, Deng B, Joy DA, Su XZ, Wellems TE.

Laboratory of Malaria and Vector Research, National Institute of Allergy and Infectious Diseases, National Institutes of Health, Building 4, Room 126, NIH Campus, Bethesda, MD 20892-0425, USA.

Quinine (QN) remains effective against Plasmodium falciparum, but its decreasing efficacy is documented from different continents. Multiple reports highlight contributions to the evolution of QN resistance. To better understand contributions to QN response variation, we have sequenced homologous chromosome segments of three QN-resistant parasite strains, and identified previously described QTLs of QNL and QNM, as well as a new QTL, QNL of QNM, in the pfmdr1 gene. A novel QTL, QNL(P), is revealed, associated with trait levels of QN resistance. The QNL(P) allele is more frequent in QN-resistant strains from Africa and Central and South America. A polymorphism in pfmdr1 is associated with QNL(P) and may be a target for future drug development.

From the Abstract display links to full text publishers resources are shown near the top of the record.
When you arrive at the article on the publishers' site you will see some authentication displayed on the page.
Dissecting the loci of low-level quinine resistance in malaria parasites

Michael T. Ferdig¹, ², Roland A. Cooper¹,³, Jianbing Mu¹, Bingbing Deng², Deirdre A. Joy², Xin-zhuan Su¹ and Thomas E. Wellems⁴

Summary

Quinine (QN) remains effective against Plasmodium falciparum, but its decreasing efficacy is documented from different continents. Multiple genes are likely to contribute to the evolution of QN resistance. To locate genes contributing to QN response variation, we have examined a P. falciparum genetic cross for quantitative trait loci (QTL) and pairwise effects from two additional loci of interest, respectively, with the QTL of Chr 13 and Chr 7. The QTL of Chr 13 contains pfo, the protective QN resistance, and a gene known association of pfo with a QTL of QN resistance, evidence for an evolutionary relationship between QN sensitivity. The Chr 13 segment contains one of which (pfo) encodes a putative Na⁺/K⁺ ATPase, the polymorphism in pfo-F shows significant association response in a collection of P. falciparum strains from Central and South America. Dissections of the genes and modifiers involved in QN response will require experimental strategies that can identify multiple genes from different chromosomes in combination.

References

You will see an option to access full text. In this example if you select the full text link you will get the full article in HTML format. If you select the PDF or Portable document Format you will receive a scanned image of the article.

This this example we will choose PDF.
Here is a PDF document. To download a PDF document you will need a copy of the Adobe Acrobat program which can be download freely from the Adobe website.

http://www.adobe.com
PubMed have created a subset of journals for HINARI. To access this subset enter “loprovhinari[sb]” in the query box and click on the “Go” button.
The results of the HINARI subset search is access to over 1.5 Million full text articles.
A Population Genetic Test of Founder Effects and Implications for Ashkenazi Jewish Diseases.

Slatkin M.

Department of Integrative Biology, University of California Berkeley, Berkeley, CA, USA. slatkin@socrates.berkeley.edu

A founder effect can account for the presence of an allele at an unusually high frequency in an isolated population if the allele is selectively neutral and rare. Here, a statistical program the predominant ancestry, available genetic data are consistent with a founder effect resulting from a severe bottleneck in population size between a.d. 1100 and a.d. 1400 and an earlier bottleneck in a.d. 75, at the beginning of the Jewish Diaspora. The relatively high frequency of alleles causing four different lysosomal storage disorders, including Tay-Sachs disease and Gaucher disease, can be accounted for if the disease-associated alleles are recessive in their effects on reproductive fitness.

PMID: 15203782 [PubMed - as supplied by publisher]
If we enter the search “loprovinari[sb] AND tuberculosis”, we will have full text access to all 6277 articles in the result set.
PubMed have also created a “Free full text[sb]” subset, these article are available to anyone with access to PubMed.
When we run the free full text[sb] we have access to over 670000 articles.
In this example we have combined “free full text[sb] AND malaria”. The result is over 2500 full text articles available to anyone with access to PubMed.
We can combine the HINARI journals with the “free full text” subset. To do this enter the following search statement “loprovhinari[sb] OR free full text[sb]”. The result is access to over 2 million articles.
Using the History function we can now combine our free full text and HINARI result, set #1 with a search term such as malaria. Enter “#1 AND malaria”.
The result is that HINARI eligible researcher already have access to over 6225 articles on malaria.
This is the end of Module 4 Part 4.

There is a Work Book to accompany this part of the module. The workbook will take you through a live session covering the topics included in this demonstration with working examples.