

You're Invited!



What: The American Association of Immunologists
94th Annual Meeting (Immunology 2007)

Where: Miami Beach Convention Center
1901 Convention Center Drive
Miami Beach, FL 33139

When: Exhibit: May 19-21, 2007
Booth #502

Workshop: May 20, 2007 from 1-3pm (Sunday)
Room A110/111

To participate in the hands on session, please bring your laptops.

Have you ever wanted to work with an IEDB staff member directly? Do you have questions or comments about the IEDB that you'd like to discuss with us? Come by our booth (#502) and/or attend our workshop for a tutorial on the IEDB. Receive an introduction to the database and instructions on how to use this FREE online tool to your advantage. Stop by to see how we can help you or simply to say "hello." Registration is not required and there is no fee to participate.

Searching Options in the IEDB

Use of a URL

In addition to locating records in the IEDB by entering keywords, identifiers, or sequences in the Search text box in the right hand corner of the menu bar that appears on almost all the pages in the website, users can now submit searches via a properly constructed URL. Below is an example of how to perform a search using the URL. The example below will search for records that contain "dengue". This would return the equivalent of typing "dengue" in the search option on the menu bar and clicking the Search button.

<http://www.immuneEpitope.org/httpQuery.do?dispatch=runquery&searchValue=dengue>



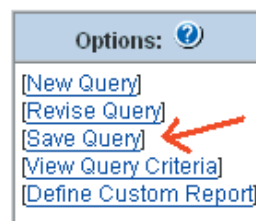
Most users would typically use the search field in the system as they were interacting with the web site. The

The URL search returns the same results as the search field in the IEDB menu bar (see image). Most

URL search feature allows advanced users to bypass the standard user interface to generate the search results. It can also be used to create hyperlinks that perform keyword searches that can be saved and re-used.

Use of Wild Cards

All the search/query features in the IEDB allow the use of wild cards. Wild card characters "%" "and" "_" can be used in the search field. The "%" character will match zero or more characters and the "_" character will match exactly one character. Additionally, the operators "and" "or" and "not" can be utilized. The search field is case insensitive. "ABC" is the same as "abc".



Hint:

If you are a registered user, you can save advanced queries and revisit your search at a later time.

Recent Publication

EpitopeViewer: a Java application for the visualization and analysis of immune epitopes in the Immune Epitope Database and Analysis Resource (IEDB)

John E Beaver¹, Philip E Bourne^{1,2}, and Julia V Ponomarenko^{*1}

¹San Diego Supercomputer Center, University of California, San Diego, 9500 Gilman Drive, La Jolla, California 92093, USA

²Department of Pharmacology, University of California, San Diego, 9500 Gilman Drive, La Jolla, California 92093, USA

* Corresponding author

Immunome Res. 2007; 3: 3.

Published online 2007 February 21. doi: 10.1186/1745-7580-3-3.

PMID: 17313688

Background

Structural information about epitopes, particularly the three-dimensional (3D) structures of antigens in complex with immune receptors, presents a valuable source of data for immunology. This information is available in the Protein Data Bank (PDB) and provided in curated form by the Immune Epitope Database and Analysis Resource (IEDB). With continued growth in these data and the importance in understanding molecular level interactions of immunological interest, there is a need for new specialized molecular visualization and analysis tools.

Results

The EpitopeViewer is a platform-independent Java application for the visualization of the three-dimensional structure and sequence of epitopes and for the analyses of their interactions with antigen-specific receptors of the immune system (antibodies, T cell receptors and MHC molecules). The viewer renders both 3D views and two-dimensional plots of intermolecular interactions between the antigen and receptor(s) by reading curated data from the IEDB and/or data calculated on-the-fly from atom coordinates from the PDB. The 3D views and associated interactions can be saved for future use and publication. The EpitopeViewer can be accessed from the IEDB website at <http://www.immuneepitope.org> through the quick link "Browse Records by 3D Structure."

Conclusion

The EpitopeViewer has been designed and been tested for use by immunologists with little or no training in molecular graphics. The EpitopeViewer can be launched from most popular Web browsers without user intervention. A Java Runtime Environment (RJE) 1.4.2 or higher is required.

Upcoming Conferences & Meetings

American Association of Immunologists
Miami Beach, Florida
May 18-22, 2007

<http://immunology2007.org>

American Society for Microbiology
Toronto, Canada
May 21-25, 2007

<http://www.gm.asm.org/>

**Federation of Clinical Immunology
Societies**
San Diego, California
June 7-11, 2007

<http://www.focisnet.org>

**13th International Congress of
Immunology**
Rio de Janeiro, Brazil
August 21-25, 2007

<http://www.immunorio2007.org.br/>

2nd International Biocuration Meeting
San Jose, California
October 25-28, 2007

<http://biocurator.org/Mtg2007/>

**35th Annual Autumn Immunology
Conference**
Chicago, Illinois
November 16-19, 2007

<http://aic.uchicago.edu/>

IEDB Tours

for viewing and downloading

We offer several video tours that are available for viewing and downloading. Each tour describes the IEDB, shows you step by step instructions on how to perform different types of queries, and how to interpret your query results. The tours are listed by subject and are in Flash Media format. Also provided are the scripts for each tour in Microsoft Excel format. To view the available tours, select “Tour the IEDB” under the “About IEDB” heading on the main menu. See the image below. To view a tour click the Flash Media link corresponding to the tour you want to watch. This will open a new window and play the video. You will need to have the Flash plug-in installed. If you are not sure whether or not you have the Flash plug-in try the link to find out. Most current browsers include Flash. The tour menu is below:



Overview		
IEDB Overview	Provides an overview of the IEDB . The following modules are discussed: Query, Analysis toos, Discussion forum, & Online help.	5 minutes 31 seconds
Query Development Overviews		
Search	Describes how to perform a search.	2 minutes 1 second
Simple Query	The simple query input form and how to input search criteria are discussed.	4 minutes 47 seconds
Advanced Query	Outlines search criteria development and how registered users save advanced queries and load saved queries.	7 minutes 8 seconds
Query Results Overviews		
Search and Simple query	The result summary page and how to analyze and download results for a search or simple query are discussed.	10 minutes 11 seconds
Advanced Query	Describes how to format, download, and analyze advanced query results.	7 minutes 9 seconds
Sample Queries		
Advanced Epitope Structure Query	Uses regular expression syntax to retrieve epitopes with a specific linear sequencing using an advanced query. In this query, a regular expression is entered into the Epitope Linear Sequence field.	2 minutes 45 seconds
Advanced Epitope Structure and Source Query 1	Demonstrates how to retrieve epitopes with a specific linear sequence and source name using an advanced query. The search fields include Epitope Linear Sequence and Epitope Source Name	3 minutes 34 seconds
Advanced Epitope Structure and Source Query 2	Demonstrates how to retrieve peptide epitopes for a species and use the custom report to format query results. The search fields include Epitope Chemical Type and Epitope Source Species.	4 minutes 1 second
Advanced B Cell Query	Demonstrates how to find all epitopes with B Cell Response assays using monoclonal antibodies that react to a particular protein from a specific species strain using an advanced query. The search fields include B Cell Antibody Type and Epitope Source Name.	3 minutes 58 seconds
Simple B Cell Query	Demonstrates how to find all epitopes with B Cell Response Assays using monoclonal antibodies that reach to a particular protein from a specific species strain using a simple query. The search fields include B Cell Antibody Type and Epitope Protein or Gene.	3 minutes 40 seconds
Simple T Cell Query	Demonstrates how to retrieve T cell epitopes with a given MHC restriction using a simple query. The assay Categories and MHC Restriction fields are used.	2 minutes 40 seconds.

XDR-TB

The drug-resistant tuberculosis strain

Last year, the World Health Organization warned of a new strain of TB called XDR-TB. This strain is not only resistant to the front-line drugs, isoniazid and rifampicin, but also to at least three classes of the second-line drugs. The remaining second-line drugs used to treat patients are more costly, toxic, and weaker than the first-line drugs¹. The emergence of this strain is mainly due to poorly managed TB care. Problems include incorrect drug prescriptions, poor quality drugs and patient non-adherence. “The development of XDR-TB reveals weaknesses in primary care diagnostic services².” Practitioners need to be properly trained to diagnose and treat this airborne disease immediately to prevent the spread of infection to others.

Recommended Reading

¹Extensively drug-resistant tuberculosis as a cause of death in patients co-infected with tuberculosis and HIV in a rural area of South Africa.

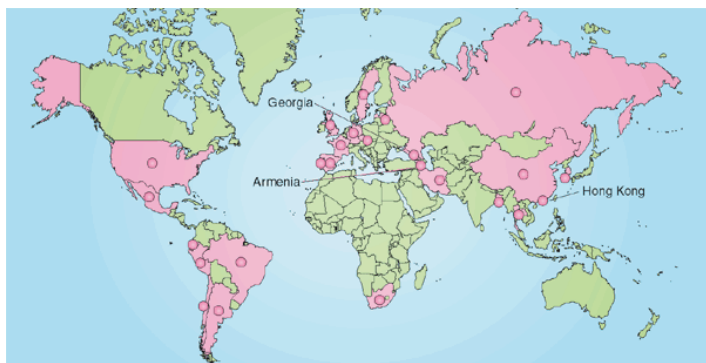
The Lancet, Volume 368, Issue 9547, Pages 1575-1580
PMID: 17084757

²XDR tuberculosis--implications for global public health.

Volume 356:656-659 February 15, 2007 Number 7
PMID: 17301295

Tuberculosis, Drug Resistance, and HIV/AIDS: A Triple Threat.

Curr Infect Dis Rep. 2007 May;9(3):252-61.
PMID: 17430708



Pink regions show countries with confirmed XDR-TB cases. Map taken from Nature Medicine - 13, 295 - 298 (2007) SE Dorman & R.E. Chaisson. PubMed:17342143 Originally from from the World Health Organization, http://www.who.int/tb/xdr/xdr_jan.pdf (accessed 22 January 2007)

Contact Information

The Immune Epitope Database & Analysis Resource is supported by a contract from the National Institute of Allergy & Infectious Disease, NIH, DHHS (Contract HHSN266200400006C). The newsletter is distributed four times a year. We welcome communication from the users of the IEDB database and invite suggestions for articles in future issues. To subscribe to the IEDB newsletter or to contact project staff, send your email information to the email address below.

Immune Epitope Database and Analysis Resource
c/o La Jolla Institute for Allergy & Immunology
9420 Athena Circle
La Jolla, CA 92037
(858) 752-6500

Email: contact@immuneEPITOPE.org
Web: <http://www.immuneEPITOPE.org>

Principal Investigator:

Alessandro Sette, Ph.D. - alex@liai.org

Co-Principal Investigator:

Bjoern Peters, Ph.D. - bpeters@liai.org

Project Director:

Stephen Wilson, Ph.D. - swilson@liai.org

Acknowledgements:

Philip Bourne, Ph.D.
Julia Ponomarenko, Ph.D.
John Beaver

Production:

Jody Dang
Ward Fleri, Ph.D.