

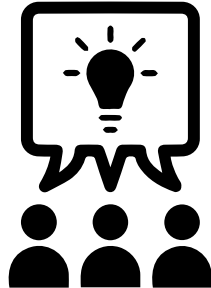


Closing Remarks & Survey

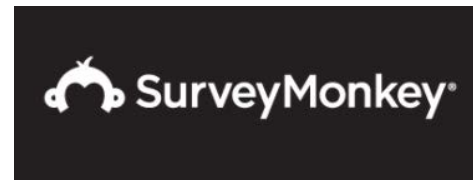
2023 IEDB Virtual User Workshop Day 1

Wednesday, November 1, 2023

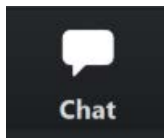
We want to hear from you!



Improve our resources
through user feedback



Daily and post-event
feedback survey



<https://www.surveymonkey.com/r/XVFPLCV>



**Please take some time to
complete the survey now**



#iedbuw2023

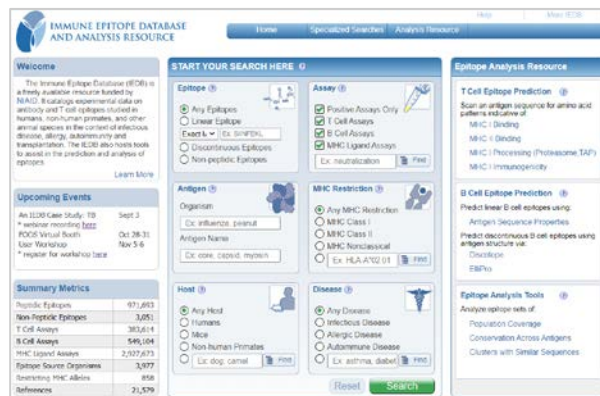
Follow us @iedb_

Recap of Day 1

Database Overview



Dr. Alessandro Sette
Principal Investigator



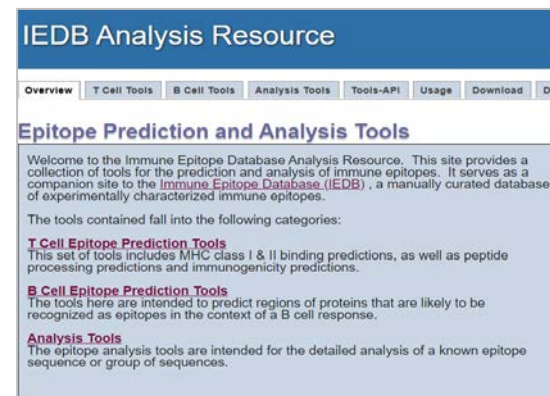
The screenshot shows the IEDB Analysis Resource interface. It features a navigation bar with 'Home', 'Specialized Searches', and 'Analysis Resources'. The main content area is divided into several sections: 'Welcome' with a brief description of the database; 'START YOUR SEARCH HERE' with filters for Epitope, Assay, Antigen, MHC Restriction, Host, and Disease; 'Upcoming Events' listing various workshops and meetings; and 'Summary Metrics' providing a table of key statistics.

Metric	Value
Thymic Epitopes	971,663
Non-Peptide Epitopes	3,051
T Cell Assays	38,214
B Cell Assays	549,104
MHC Ligand Assays	2,527,673
Epitope Source Organisms	3,977
Sequences MHC alleles	858
References	21,576

Analysis Resource Overview



Dr. Bjoern Peters
Co-Principal Investigator



The screenshot shows the 'IEDB Analysis Resource' overview page. It includes a navigation bar with 'Overview', 'T Cell Tools', 'B Cell Tools', 'Analysis Tools', 'Tools-API', 'Usage', 'Download', and 'Data'. The main content area is titled 'Epitope Prediction and Analysis Tools' and provides a welcome message. It lists several tool categories: 'T Cell Epitope Prediction Tools' (including MHC I binding, MHC II binding, and MHC II processing), 'B Cell Epitope Prediction Tools' (including B cell epitope prediction, antigen sequence properties, and B cell epitope prediction), and 'Epitope Analysis Tools' (including population coverage, conservation across antigens, and clusters with similar sequences).

Recap of Day 1

Accessing the Data: Query, Reporting and Examples



Dr. Randi Vita
Lead Ontology & Quality
Manager



Dr. Sidne Fitzpatrick
Scientific Curator

New Database Feature - Customized Data Exports



Kelly Wheeler
Senior Software Engineer

Epitope Search Pane

Search by epitope sequence



START YOUR SEARCH HERE

Epitope

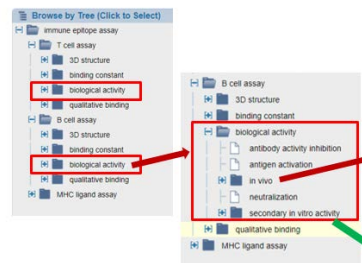
- Any
- Linear peptide
- Exact Match: Ex: SINFEKL
- Discontinuous
- Non-peptidic

Assay

- T Cell
- B Cell
- MHC Ligand
- Ex: neutralization
- Outcome: Post

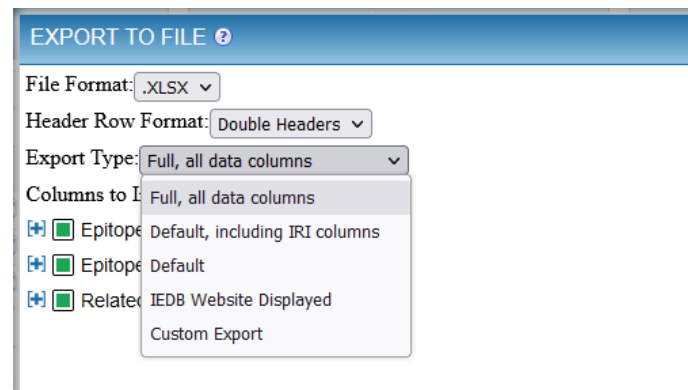
MHC Restriction

- Any
- Class I
- Class II
- Non-classical
- Ex: HLA-A*02



Browse by Tree (Click to Select)

- immune epitope assay
 - T cell assay
 - 3D structure
 - binding constant
 - biological activity
 - qualitative binding
 - B cell assay
 - 3D structure
 - binding constant
 - biological activity
 - qualitative binding
 - MHC ligand assay
 - B cell assay
 - binding constant
 - biological activity
 - antibody activity inhibition
 - antigen activation
 - in vivo
 - neutralization
 - secondary in vitro activity
 - qualitative binding
 - MHC ligand assay



EXPORT TO FILE

File Format: .XLSX

Header Row Format: Double Headers

Export Type: Full, all data columns

Columns to Export: Full, all data columns

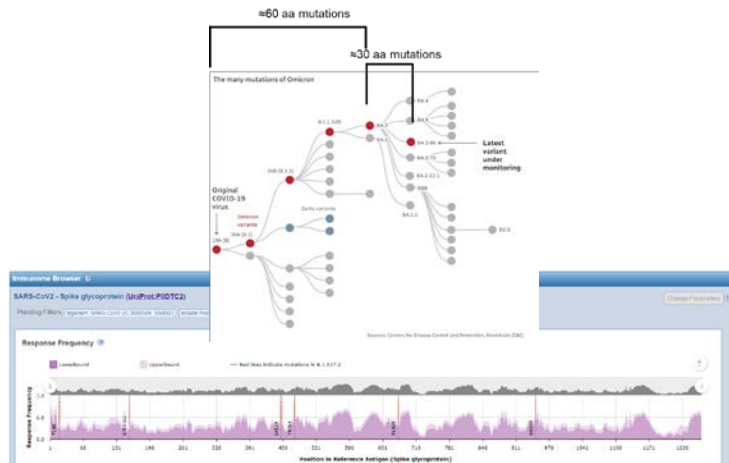
- Epitope: Default, including IRI columns
- Epitope: Default
- Related: IEDB Website Displayed
- Custom Export

Recap of Day 1

Using the IEDB in your Research



Dr. Alba Grifoni
LJI Research Faculty/Instructor



Analysis Tools



Dr. Alessandro Sette
Principal Investigator



User Workshop Structure

Day 1

START YOUR SEARCH HERE

Epitope

Any
 Linear peptide
Exact N
 Discontinuous
 Non-peptidic

Assay

T Cell
 B Cell
 MHC Ligand
Ex: neutralization
Outcome: Positive Negative

Epitope Source

Organism
Ex: influenza, peanut
Antigen
Ex: core, capsid, myo:

MHC Restriction

Any
 Class I
 Class II
 Non-classical
Ex: HLA-A*02:01

Host

Any
 Human
 Mouse
 Non-human primate
Ex: dog, camel

Disease

Any
 Infectious
 Allergic
 Autoimmune
Ex: asthma

Process Overview and Database

Day 2

IEDB Analysis Resource

[Overview](#) [T Cell Tools](#) [B Cell Tools](#) [Analysis Tools](#) [Tools-API](#) [Usage](#) [Download](#) [Data](#)

Epitope Prediction and Analysis Tools

Welcome to the Immune Epitope Database Analysis Resource. This site provides a collection of tools for the prediction and analysis of immune epitopes. It serves as a companion site to the [Immune Epitope Database \(IEDB\)](#), a manually curated database of experimentally characterized immune epitopes.

The tools contained fall into the following categories:

T Cell Epitope Prediction Tools

This set of tools includes MHC class I & II binding predictions, as well as peptide processing predictions and immunogenicity predictions.

B Cell Epitope Prediction Tools

The tools here are intended to predict regions of proteins that are likely to be recognized as epitopes in the context of a B cell response.

The screenshot shows the IEDB Analysis Resource website. At the top, there is a navigation bar with links for Overview, T Cell Tools, B Cell Tools, Analysis Tools, Tools-API, Usage, Download, and Data. Below this is a header for 'Epitope Prediction and Analysis Tools'. The main content area features a welcome message and a list of tool categories. A 'T Cell Prediction - Class I' tool is highlighted, showing a text input field with a protein sequence and a search button. Below the search field, there is a section for 'Additional Resources' with links for 'API' and 'Downloads'. The page also includes a sidebar with 'Announcements' and 'Appearances & Events'.

Next-Generation Tools & Analysis Resource

Day 3



Specialized Topics – 3D Structures, Cancer, HIV

Agenda – Day 2

Start Time	End Time	Topic	Speaker
08:00	08:15	Welcome & Analysis Resource Overview	Nina Blazeska <i>IEDB Senior Project Manager</i>
08:15	08:30	IEDB Next-Generation Tools Introduction	Jason Greenbaum <i>Bioinformatics Core Director</i>
08:30	09:00	T Cell Class I Tools (Binding, Processing, Immunogenicity)	Jason Greenbaum <i>Bioinformatics Core Director</i>
09:00	09:15	Next Generation Tool Pipelines - Cluster & PEPmatch	Bjoern Peters <i>IEDB Co-Principal Investigator</i>
09:15	10:00	T Cell Class II Tools (Binding, Processing, Immunogenicity)	Bjoern Peters <i>IEDB Co-Principal Investigator</i>
10:00	10:20	<u>Section 1</u> : Q&A with Drs. Greenbaum and Peters	
10:20	10:35	Break	

Agenda – Day 2

Start Time	End Time	Topic	Speaker
10:35	11:05	B Cell Epitope Prediction	Eve Richardson <i>Bioinformatics Postdoctoral Researcher</i>
11:05	11:35	Receptor Tools - TCRMatch	Raphael Trevizani <i>Bioinformatics Postdoctoral Researcher</i> Mahita Jarjapu <i>Bioinformatics Postdoctoral Researcher</i>
11:35	11:50	<u>Section 2</u> : Q&A with Drs. Richardson, Trevizani and Jarjapu	
11:50	12:00	Closing Remarks & Feedback Survey	Nina Blazeska <i>IEDB Senior Project Manager</i>
	12:00	End of Session	



Additional Questions?

Email us at help@iedb.org



Thank you!

See you tomorrow for Day 2

We appreciate your time and interest in the IEDB!