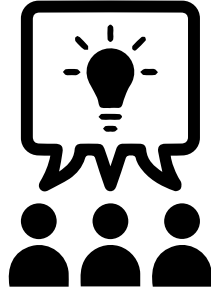


Closing Remarks & Survey

2022 IEDB Virtual User Workshop – Day 1

Wednesday, October 26, 2022

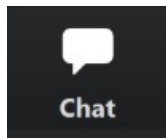
We want to hear from you!



Improve our resources
through user feedback



Daily and post-event
feedback survey



<https://www.surveymonkey.com/r/G5WS2HJ>



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



#iedbuw2022

Follow us @iedb_

Recap of Day 1

Database Overview

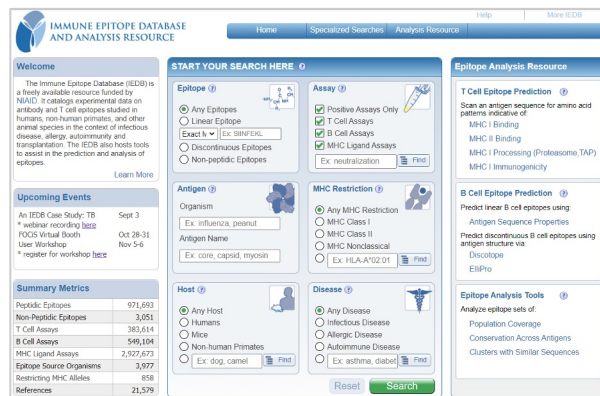


Dr. Alessandro Sette
Principal Investigator

Analysis Resource Overview

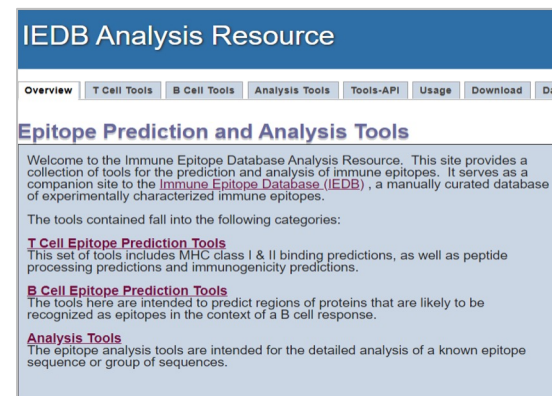


Dr. Bjoern Peters
Co-Principal Investigator



The screenshot shows the IEDB homepage with a navigation bar (Home, Specialized Searches, Analysis Resource, Help, More IEDB) and a main content area. The main content area includes a 'Welcome' section, 'START YOUR SEARCH HERE' with filters for Epitope, Assay, Antigen, MHC Restriction, Host, and Disease, and a 'Summary Metrics' table.

Category	Count
Peptide Epitopes	971,693
Non-Peptide Epitopes	3,051
T Cell Assays	383,614
B Cell Assays	546,104
MHC Ligand Assays	2,927,673
Epitope Source Organisms	3,977
Restricting MHC Alleles	859
References	21,576



The screenshot shows the IEDB Analysis Resource page with a navigation bar (Overview, T Cell Tools, B Cell Tools, Analysis Tools, Tools-API, Usage, Download, Data) and a main content area. The main content area includes a 'Welcome' section, 'Epitope Prediction and Analysis Tools' section, and a 'Summary Metrics' table.

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.
- Analysis Tools**
The epitope analysis tools are intended for the detailed analysis of a known epitope sequence or group of sequences.

Recap of Day 1

Accessing the Data: Query, Reporting and Examples

New Database Features - Custom Exports



Dr. Randi Vita
*Lead Ontology & Quality
Manager*



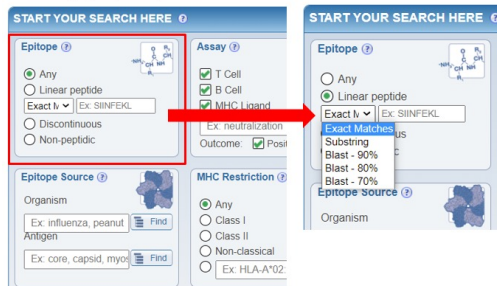
Dr. Sidne Fitzpatrick
Scientific Curator



Kelly Wheeler
Senior Software Engineer

Epitope Search Pane

Search by epitope sequence



START YOUR SEARCH HERE

Epitope

- Any
- Linear peptide
- Exact tv Ex: SIINFEKL
- Discontinuous
- Non-peptidic

Assay

- T Cell
- B Cell
- MHC I ligand
- MHC II ligand

Epitope Source

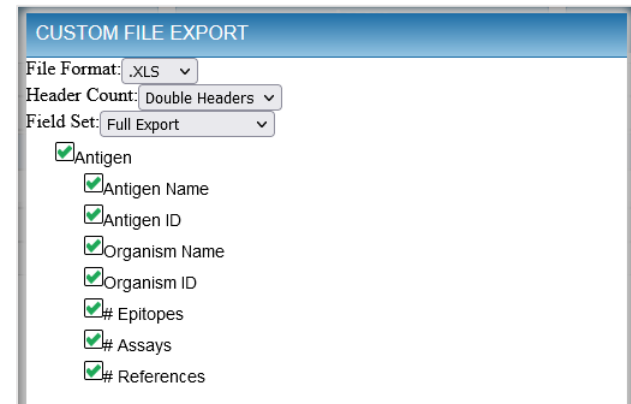
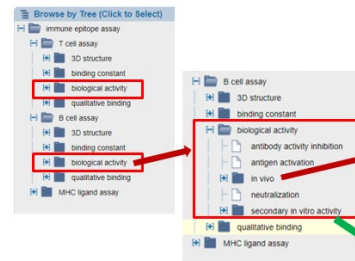
- Any
- Linear peptide
- Exact tv Ex: SIINFEKL
- Exact matches
- Substring
- Blast - 90%
- Blast - 80%
- Blast - 70%
- Epitope source

Organism

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

MHC Restriction

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



CUSTOM FILE EXPORT

File Format: .XLS

Header Count: Double Headers

Field Set: Full Export

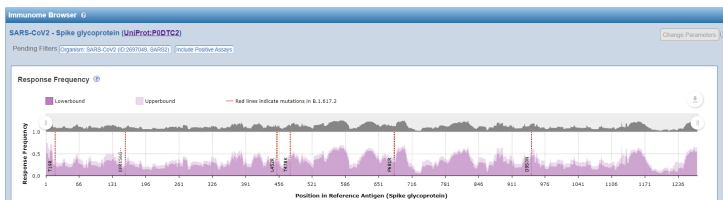
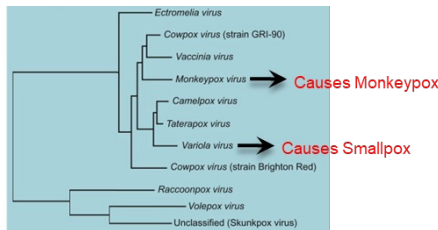
- Antigen
 - Antigen Name
 - Antigen ID
 - Organism Name
 - Organism ID
 - # Epitopes
 - # Assays
 - # References

Recap of Day 1

Using the IEDB in your Research: Orthopox & SARS-CoV-2 Examples



Dr. Alba Grifoni
LJI Research Faculty/Instructor



Analysis Tools



Dr. Alessandro Sette
Principal Investigator



A screenshot of the IEDB Analysis Resource website. The top navigation bar includes 'Overview', 'T Cell Tools', 'B Cell Tools', 'Analysis Tools', 'Tools API', 'Usage', 'Download', 'Datasets', 'Contribute Tools', and 'Reference'. The 'Analysis Tools' section is highlighted. Below this, there are several tool descriptions: 'Population Coverage', 'Epitope Conservancy Analysis', 'Epitope Cluster Analysis', 'Computational Methods for Mapping Mimotopes to Protein Antigens', 'RATE (Restrictor Analysis Tool for Epitopes)', and 'ImmunomeBrowser'. Each tool description includes a brief overview of its function and how it is used.

User Workshop Structure

Day 1

START YOUR SEARCH HERE

Epitope ⓘ

Any
 Linear peptide
Exact N ▾ Ex: SIINFSEKL
 Discontinuous
 Non-peptidic

Assay ⓘ

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

Epitope Source ⓘ

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

MHC Restriction ⓘ

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

Host ⓘ

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

Disease ⓘ

Any
 Infectious
 Allergic
 Autoimmune
Ex: asthma Find

Reset Search

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

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Analysis Tools

The epitope analysis tools are intended for the detailed analysis of a known epitope sequence or group of sequences.

Analysis Resource – Processing & Prediction Tools

Day 3



Specialized Topics – 3D Structures, Cancer, HIV

Preview of Day 2

Start Time	End Time	Topic	Speaker
08:00	08:15	Welcome & Analysis Resource Overview	Nina Blazeska <i>IEDB Project Manager</i>
08:15	08:45	MHC Binding Predictions	Raphael Trevizani <i>Bioinformatics Postdoctoral Researcher</i>
08:45	09:05	T Cell Processing & Immunogenicity Predictions	Bjoern Peters <i>IEDB Co-Principal Investigator</i>
09:05	09:20	<u>Section 1</u> : Q&A with Drs. Trevizani and Peters	
09:20	09:40	PEPMatch	Daniel Marrama <i>Bioinformatics Research Technician</i>
09:40	10:00	TCRMatch	Raphael Trevizani <i>Bioinformatics Postdoctoral Researcher</i>
10:00	10:10	<u>Section 2</u> : Q&A with Drs. Marrama and Trevizani	
10:10	10:35	Break	

Preview of Day 2

Start Time	End Time	Topic	Speaker
10:35	11:05	B Cell Epitope Prediction	Mahita Jarjapu <i>Bioinformatics Postdoctoral Researcher</i>
11:05	11:35	IEDB Tools 3.0: Future of Tools	Jason Greenbaum <i>Bioinformatics Core Director</i>
11:35	11:50	<u>Section 3</u> : Q&A with Drs. Jarjapu and Greenbaum	
11:50	12:00	Closing Remarks & Feedback Survey	Nina Blazeska <i>IEDB 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!