

Navigating ImmPort.org

Use toolbar to select modules



Website update this weekend

Postings of website updates

What is ImmPort?

ImmPort is a long-term, sustainable data warehouse for the purpose of promoting re-use of immunological data generated by NIAID DAIT and DMID funded investigators.

The Immunology Database and Analysis Portal (ImmPort) system was developed under the Bioinformatics Integration Support Contract (BISC) Phase II by the Northrop Grumman Information Technology Health Solutions team for the National Institutes of Health (NIH), National Institute of Allergy and Infectious Diseases (NIAID), Division of Allergy, Immunology, and Transplantation (DAIT).

Study Explorer

Top Studies

News releases and upcoming events

News

June 2014

studies with updates to 8.

[more >](#)

Just released! Looking for flow cytometry data? Over 3400 flow cytometry files can be found in the University of Washington TLR/ligand studies (SDY281, SDY282, SDY283, SDY284)

[more >](#)

HIPC Standards Working Group presented at Bio-Ontologies 2014: "Ontology-Aware Immunological Data

Select Fields:

1

Clinical Trial

2

Study Type

3

Subject Species

Update

Total: 95

Clinical Trial

Study Type

Subject Species

Research Focus

Experiment Measurement

Dropdown menu to assist with study filtering

All (95)	N (73)	Interventional (32)	Homo sapiens (16)
			Mus musculus (15)
			Anas platyrhynchos (1)
			Gallus gallus (1)
			Mustela putorius furo (1)
		Observational (32)	Homo sapiens (24)
			Mus musculus (8)
			Macaca mulatta (1)
		Longitudinal (9)	Mus musculus (6)
			Sus scrofa domesticus (2)
			Homo sapiens (1)

Navigating ImmPort.org

Study Filter: Select Fields

Study Explorer Top Studies

Select Fields: 1 Clinical Trial 2 Research Focus 3 Experiment Meas

Update

Click update after selecting fields

Total: 81

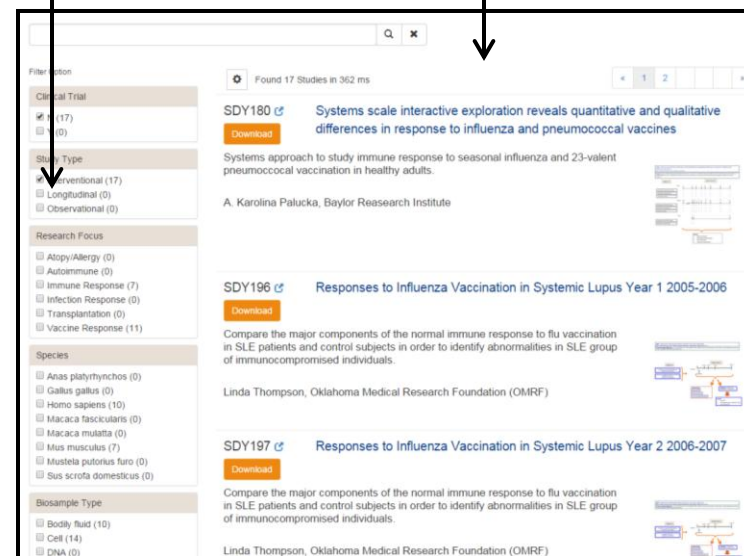
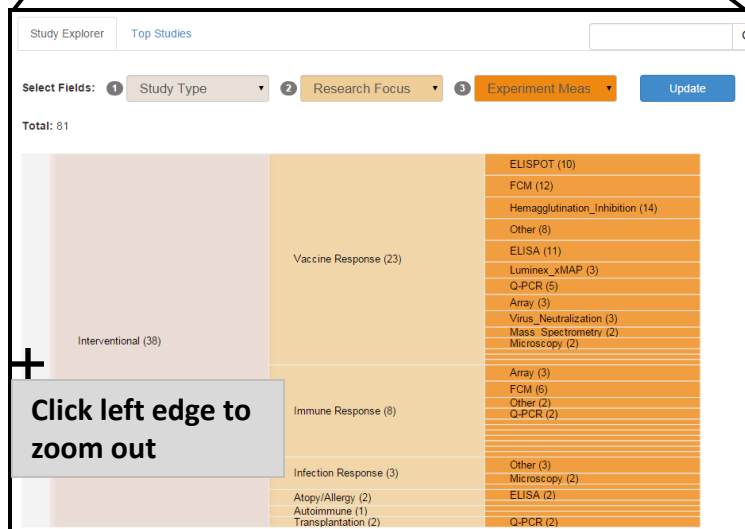
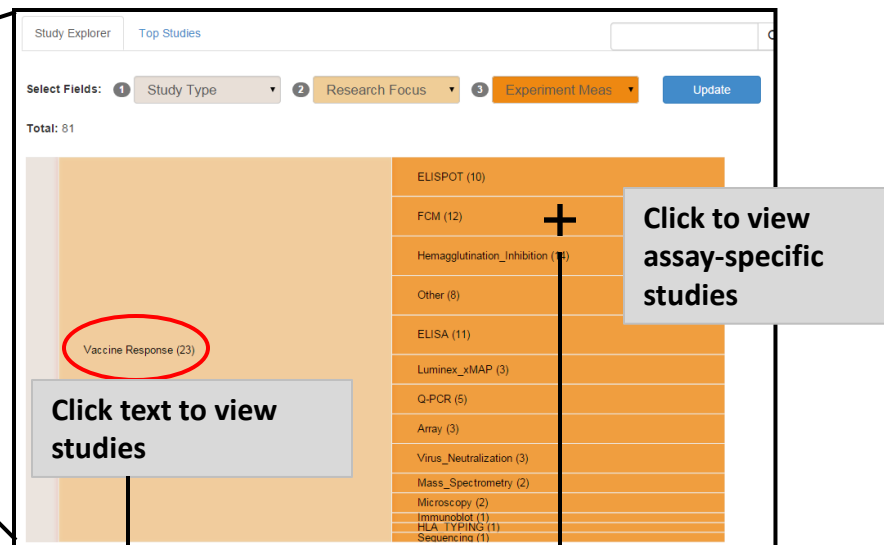
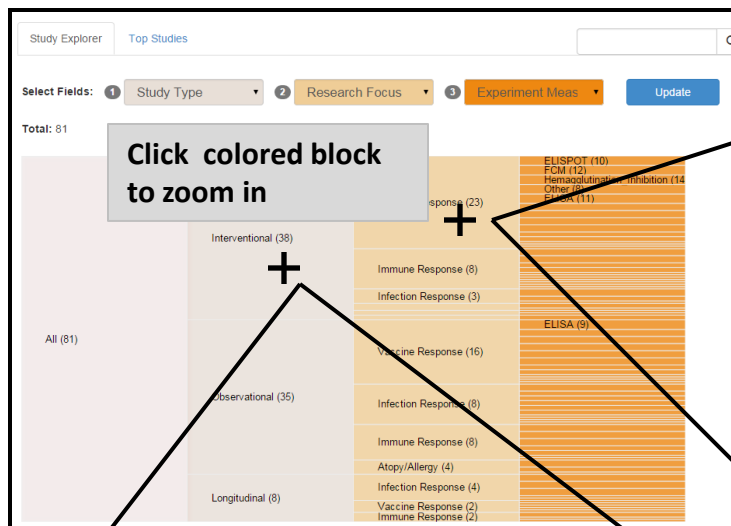
Count of available studies based on fields selected

Color-coded field display

All (81)	N (70)	Vaccine Response (39)	ELISPOT (15) FCM (17) Hemagglutination_Inhibition (16) Other (11) Virus_Neutralization (4) Q-PCR (6) HLA_TYPING (5) Luminex_xMAP (5)
		Immune Response (18)	FCM (13) Arrav (3) ELISA (4) ELISPOT (5) Other (5) Q-PCR (4)
		Infection Response (15)	Other (9) Arrav (4) ELISPOT (4) FCM (5) Microscopy (3) Q-PCR (5)
	Y (11)	Vaccine Response (2)	
		Atopy/Allergy (6)	ELISA (5) FCM (3)

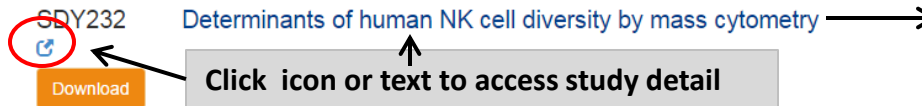
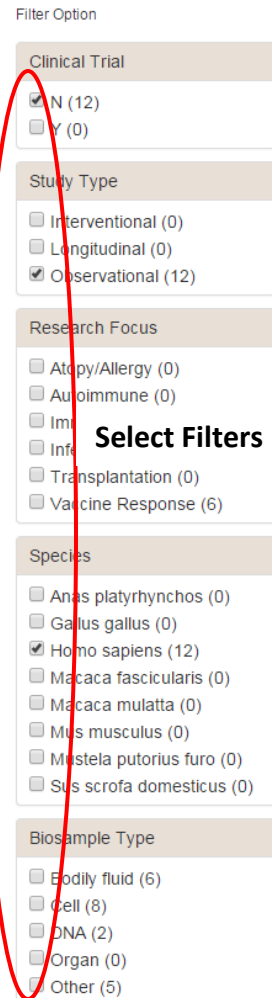
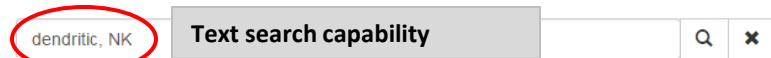
Navigating ImmPort.org

Study Filter: zoom, detail view



Navigating ImmPort.org


Search for Studies



Natural Killer (NK) cells play critical roles in immune defense and reproduction, yet remain the most poorly understood lymphocyte population. Because their activation is controlled by a variety of combinatorially expressed activating and inhibitory receptors, NK cell diversity and function are closely linked. To provide an unprecedented understanding of NK cell repertoire diversity, we used ma...

...Determinants of human **NK** cell diversity by mass cytometry...
Natural Killer (**NK**) cells play critical roles in immune defense and production, yet remain the mo...
...This was purely an observational study phenotyping **NK** cells in healthy adults. No specific co...
...The endpoint of this study was to describe and quantify the diversity within the **NK** cell re...
...ability of the **NK** cell repertoire
...We measured expression of 28 **NK** cell related markers, comprising both inhibitory and activating re...
...iversity of the healthy human **NK** cell repertoire, providing a framework to understand the roles of **NK** cells in he...
...in house mass tag of Beckman Coulter anti-**NKG2A** , Clone Z199.1.10...

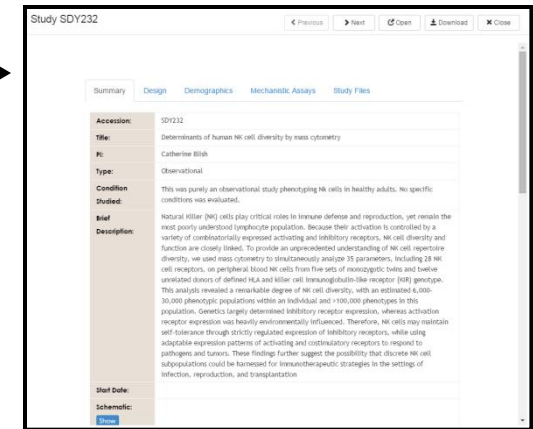
Catherine Blish, Stanford University

SDY36  Immune response of patients during pregnancy

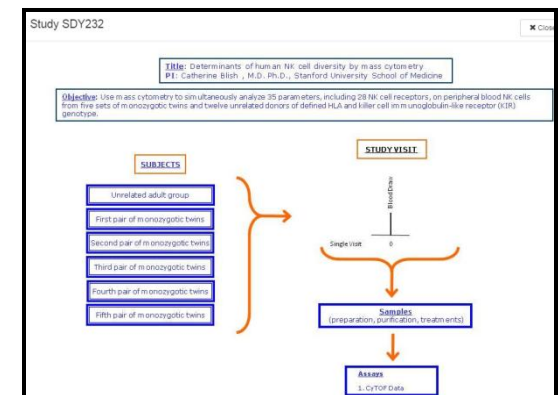
Download

Immune response of patients during pregnancy, however, the role of NK cells in pregnancy, and its impact on the outcome of pregnancy, is not clear. NK cells play a critical role in pregnancy, however, the role of NK cells in pregnancy, and its impact on the outcome of pregnancy, is not clear. NK cells play a critical role in pregnancy, however, the role of NK cells in pregnancy, and its impact on the outcome of pregnancy, is not clear.

Study Detail View



Study Schematic



Navigating ImmPort.org

ImmPort Home

Flow Analysis

ImmPort Labs

ImmuneXpresso

Studies

Submission

Documentation

Help



Website update this weekend We will be offline this Saturday for site maintenance

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News

Studies:95, Subjects:18510, Experiments:404

[more](#)

June 2014 - ImmPort released 2 new studies with updates to 8.

[more](#)

Just released! Looking for flow cytometry data? Over 3400 flow cytometry files can be found in the University of Washington TLR/ligand studies (SDY281, SDY282, SDY283, SDY284)

[more](#)

HIPC Standards Working Group presented at Bio-Ontologies 2014: "Ontology-Aware"

[Study Explorer](#)

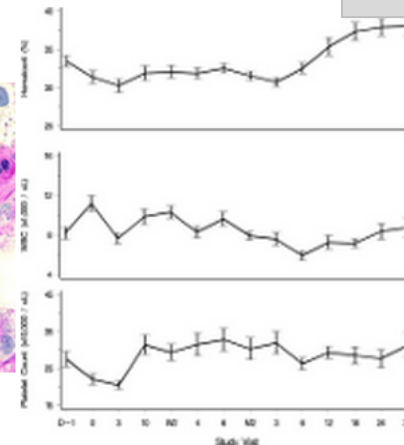
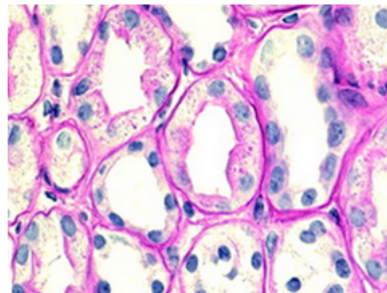
[Top Studies](#)

Featured studies



Thirty-four children were entered into a pilot trial of calcineurin inhibitor avoidance after living-donor kidney transplantation. Patients were treated with anti-CD25 mAb, prednisone, mycophenolate mofetil, and sirolimus. It is concluded that calcineurin inhibitor-free immunosuppression can be safe and effective in pediatric living-donor renal transplantation.

PubMed ID: 16687625 [DOWNLOAD DATA PACKAGE](#)



[click to view more](#)

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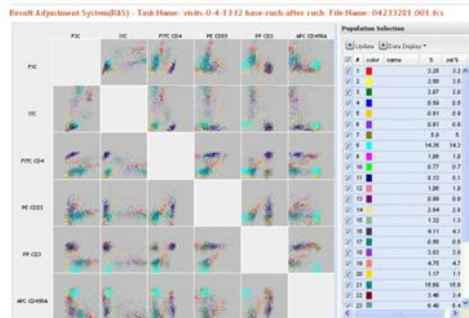
Click 'Flow Analysis' for information about ImmPort Flow Cytometry Analysis module

Flow Analysis ImmPort

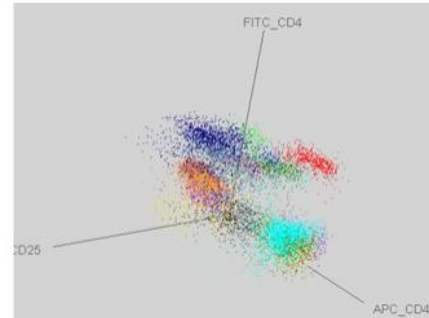
Flow Cytometry Analysis Workflow



Two Dimensional Visualization



Three Dimensional Visualization



The links below will direct you to the ImmPort Flow Cytometry Analysis tools which require a login to keep your data private.

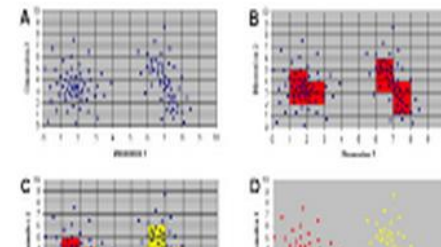
ImmPort's flow cytometry analysis component includes:

- Data Management for Single File Upload, Multiple File Upload and Dataset Generation ➔
- Automated population identification using the FLOCK algorithm for individual sample or dataset ➔
- Automated mapping populations across sample for Cross-Sample Comparison ➔
- Result visualization and statistical analysis of population characteristics ➔

FLOCK Algorithm Overview

The FLOCK algorithm consists of four core steps: hyper-grid creation, identifying dense hyper-regions, merging-neighboring dense hyper-regions, clustering based on centroids derived from the merged dense hyper-regions.

- A) A gridding example. Each dimension corresponds to one measured characteristics(e.g. fluorescence at given wavelength).Each dot is one event(e.g. data about a cell) with characteristic values (e.g. fluorescence intensity) as its coordinates. A number of equal-sized partitions (in this example the number is ten) are created on each dimension to generate a hyper-grid.
- B) Dense data hyper-regions. Density of a data hyper-region is calculated based on the number of events inside the region. A density threshold is determined by a data-driven approach described in the Methods section. Hyper-regions having larger number of events than the density threshold is set at two and the resulting dense hyper regions are marked in red.



Clicking on ImmPort Labs takes you to our Beta site where you can take new features for a test drive



Explore

About

ImmPort Labs

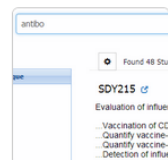
ImmPort Labs provides an early peek at "Beta" tools that are under development by the BISC team, as well as a platform for external developers to highlight their own tools that utilize ImmPort data.

[Learn more](#)

[Take survey](#)

[Visit ImmPort](#)

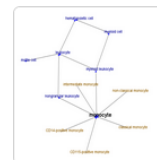
Study Search Option 1



Study Search

The display changes as you enter your search term(s). Matching terms are highlighted

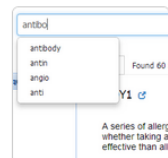
ImmPort's Cell Ontology Browser



Cell Ontology Browser

The cell ontology browser enables you to see the relationships among cell types.

Study Search Option 2



Study Search

The display provides term options as you enter your search term(s). Click search icon to view results, matching terms are highlighted

immuneXpresso

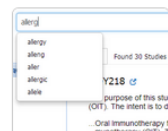
Available

So many cells ...
So many cytokines ...
So many conditions ...



Connect the Dots

Study Search Option 3




Study Search

The display is a combination of Option 1 and 2; as text is entered, term options are provided, studies are displayed and matching terms are highlighted

Navigating ImmPort.org

Click on ImmuneXpresso to access the ImmuneXpresso knowledge base

 immuneXpresso

Got Feedback! Contact Help ▾

Q Search immuneXpresso

Specify your filter term

Search Term (e.g. CD4, T cell) ▾ Clear

Filters ×

Cell ? 0

Cytokine ? 0

Context Info

Disease ? 0


Drug ? 0

Tissue ? 0

⊕ Interaction Type

⊕ Article

So many cells ...
So many cytokines ...
So many conditions ...

 Connect the Dots

immuneXpresso

Sponsored by:

- National Institute of Allergy and Infectious Diseases (NIAID)
- National Institutes of Health (NIH)
- Health and Human Services (HHS)

Recommended Browsers: Chrome, Firefox, Safari v7+, Internet Explorer v9.0+

The ImmPort Ecosystem

The ImmPort Ecosystem is comprised of a number of resources, each contributing to the richness of ImmPort's public data. For instance, ImmPort experiment samples link out to GEO, dbGAP, IPD-KIR and others. Reagents identified in ImmPort link to Antibody Registry while ImmuneXpresso and Cell Ontology Browser facilitate scientific queries. Please feel free to browse the Ecosystem--click an icon and explore!

