User Guide

IUPHAR
Guide to IMMUNOPHARMACOLOGY

The Guide to IMMUNOPHARMACOLOGY (GtoImmuPdb) has been developed as an extension to the existing Guide to PHARMACOLOGY (GtoPdb).

In practise, this mean that rather than build a new database, the underlying GtoPdb schema has been extended to incorporate new immune system specific data types (such as processes and cell types). It also means the existing GtoPdb website has been further developed to surface this new data and incorporate it into the existing search and browse mechanisms.

GtoImmuPdb does not therefore have its own website. What has been developed is a new portal (home page) which serves as a unique immunological access-point to the Guide to PHARMACOLOGY.

http://dev.guidetopharmacology.org/immuno

The portal has its own unique branding (header bar, logo and colour scheme) to distinguish it, but retains many of the layout features from the main GtoPdb site. This consistency should help users already familiar with GtoPdb to orientate themselves with the new GtoImmuPdb.

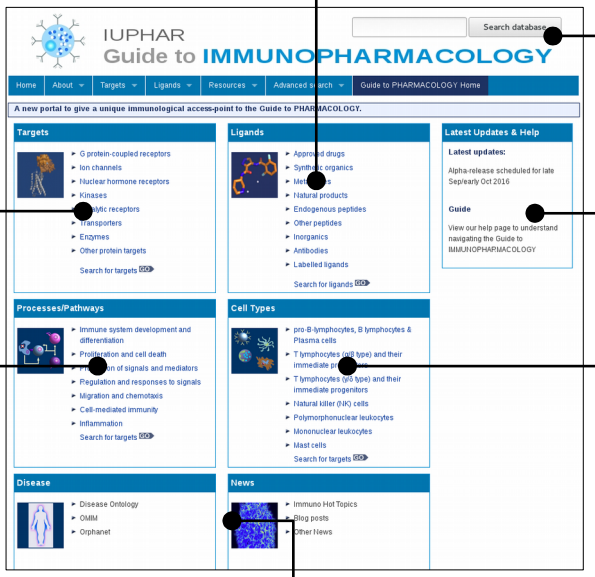
Users can familiarise themselves with the existing GtoPdb site by reading the website tutorial:

http://www.guidetopharmacology.org/GuidetoPHARMACOLOGY_Tutorial.pdf

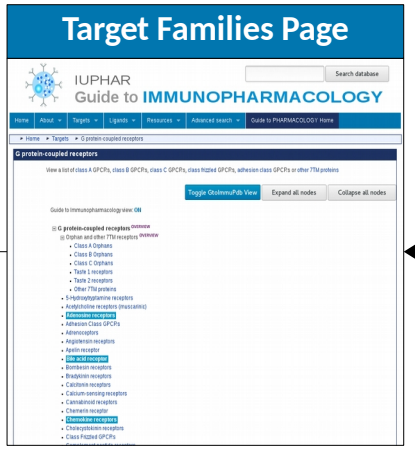
The guide in this document gives an overview of the new GtoImmuPdb portal, and illustrates the new additions to existing pages that have been developed for GtoImmuPdb.

Information on the new data incorporated into GtoImmuPdb is described in more detail in other documentation.
Process
Cell Type

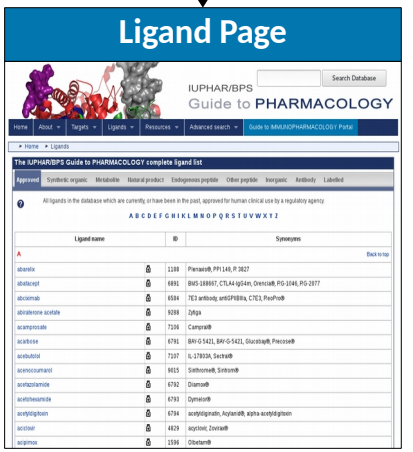
GtoImmuPdb User Guide – Main Portal site flow



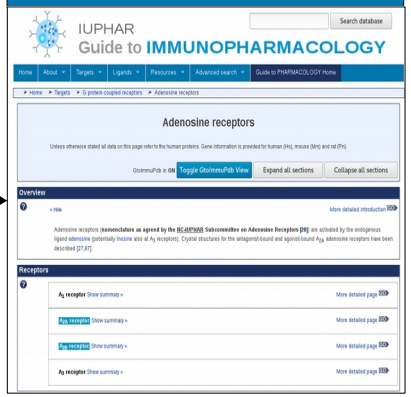
Target Families Page



Ligand Page

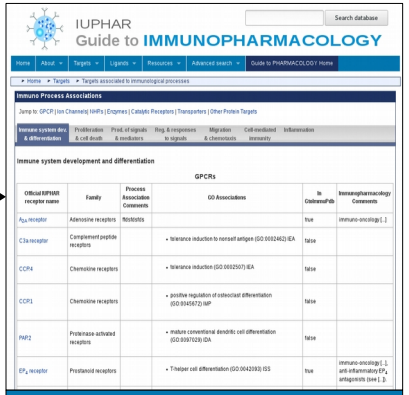


Target Family Page

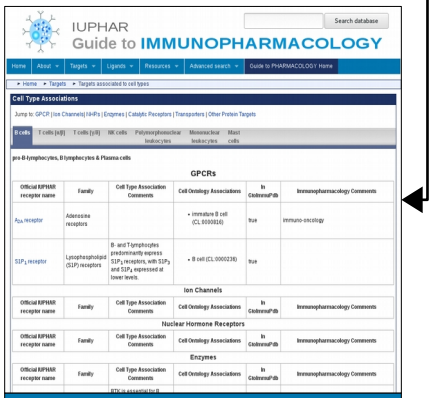


Detailed Target Page

Process Association List



Cell Type Association List

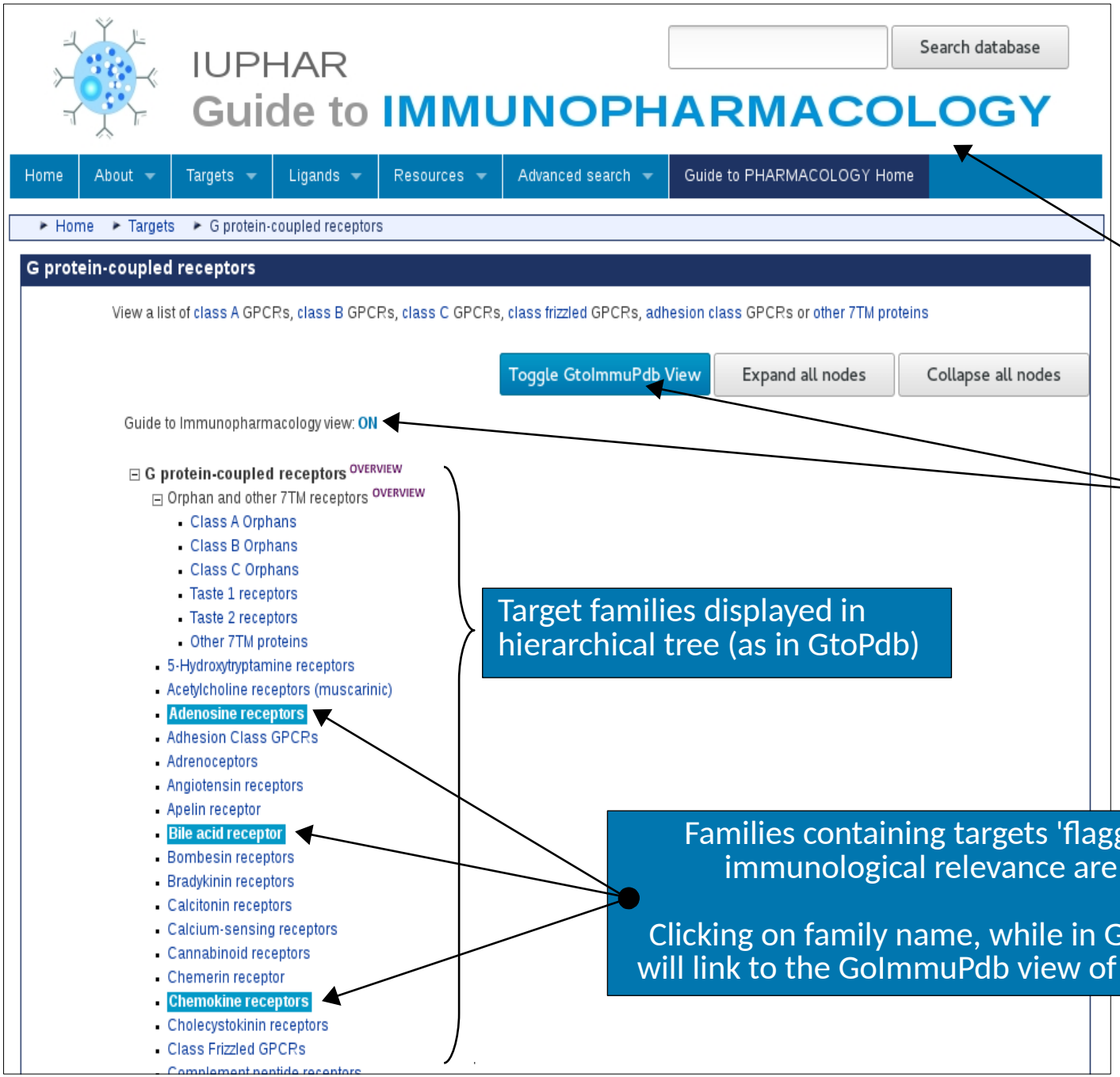


Site search incorporates process and cell type data

Side-bar links to release documentation and/or user guide

Disease and News panels not yet implemented

GtoImmuPdb User Guide – Target Families Page



Uses same page as for GtoPdb, but has the GtoImmuPdb view switched on.

GtoImmuPdb view has it's own header and menu-bar.

Toggle button switches between GtoImmuPdb and GtoPdb view.

Target families displayed in hierarchical tree (as in GtoPdb)

Families containing targets 'flagged' as being of immunological relevance are highlighted.

Clicking on family name, while in GtoImmuPdb view, will link to the GoImmuPdb view of that family's page.

GtoImmuPdb User Guide – Target Family Page

Uses same page as for GtoPdb, but has the GtoImmuPdb view switched on.

GtoImmuPdb view has it's own header and menu-bar.

Toggle button switches between GtoImmuPdb and GtoPdb view.

Link to detailed view of that target

Targets 'flagged' as being of immunological relevance are highlighted.

GtoImmuPdb User Guide – Detailed Target Page

New GtoImmuPdb sections added that surface immune specific data added for GtoImmuPdb

At this level, header remain as existing GtoPdb version. But includes link back to GtoImmuPdb Portal

Within the contents, new sections are highlighted:

Immunopharmacology Comments
Immuno Cell Type Associations
Immuno Process Associations

GtoImmuPdb User Guide – Detailed Target Page

New GtoImmuPdb sections

Immunopharmacology Comments

immuno-oncology [4]

Immuno Cell Type Associations

Immuno Cell Type:	pro-B-lymphocytes, B lymphocytes & Plasma cells
Cell Ontology Term:	immature B cell (CL:0000816)
Comment:	
References:	73

Immuno Cell Type:	Mast cells
Cell Ontology Term:	mast cell (CL:0000097) mucosal type mast cell (CL:0000485)
Comment:	
References:	

Immuno Cell Type:	T lymphocytes (gamma-delta type) and their immediate progenitors
Cell Ontology Term:	mature gamma-delta T cell (CL:0000800)
Comment:	no comment
References:	1

Immuno Cell Type:	Natural Killer (NK) cells
Cell Ontology Term:	non-specified (GTOIMMUPDB_DEFAULT_CELL:4)
Comment:	A2A receptor has non-specific association to Natural Killer cells.
References:	

Immuno Process Associations

Immuno Process:	Regulation and responses to signals
Immuno Process ID:	4
Comment:	
GO Annotation:	Associated to GO processes
GO Processes:	inflammatory response (GO:0006954) TAS
References:	

Immuno Process:	Inflammation
Immuno Process ID:	7
Comment:	
GO Annotation:	Associated to GO processes
GO Processes:	inflammatory response (GO:0006954) TAS
References:	

Immunopharmacology Comments:
General comments, with any references, provided by our curators.

Immuno Cell Type Associations
Each sub-section gives details of the association between the target and the GtoImmuPdb top-level cell type category

Displays any associated Cell Ontology terms

Displays curator comments and references

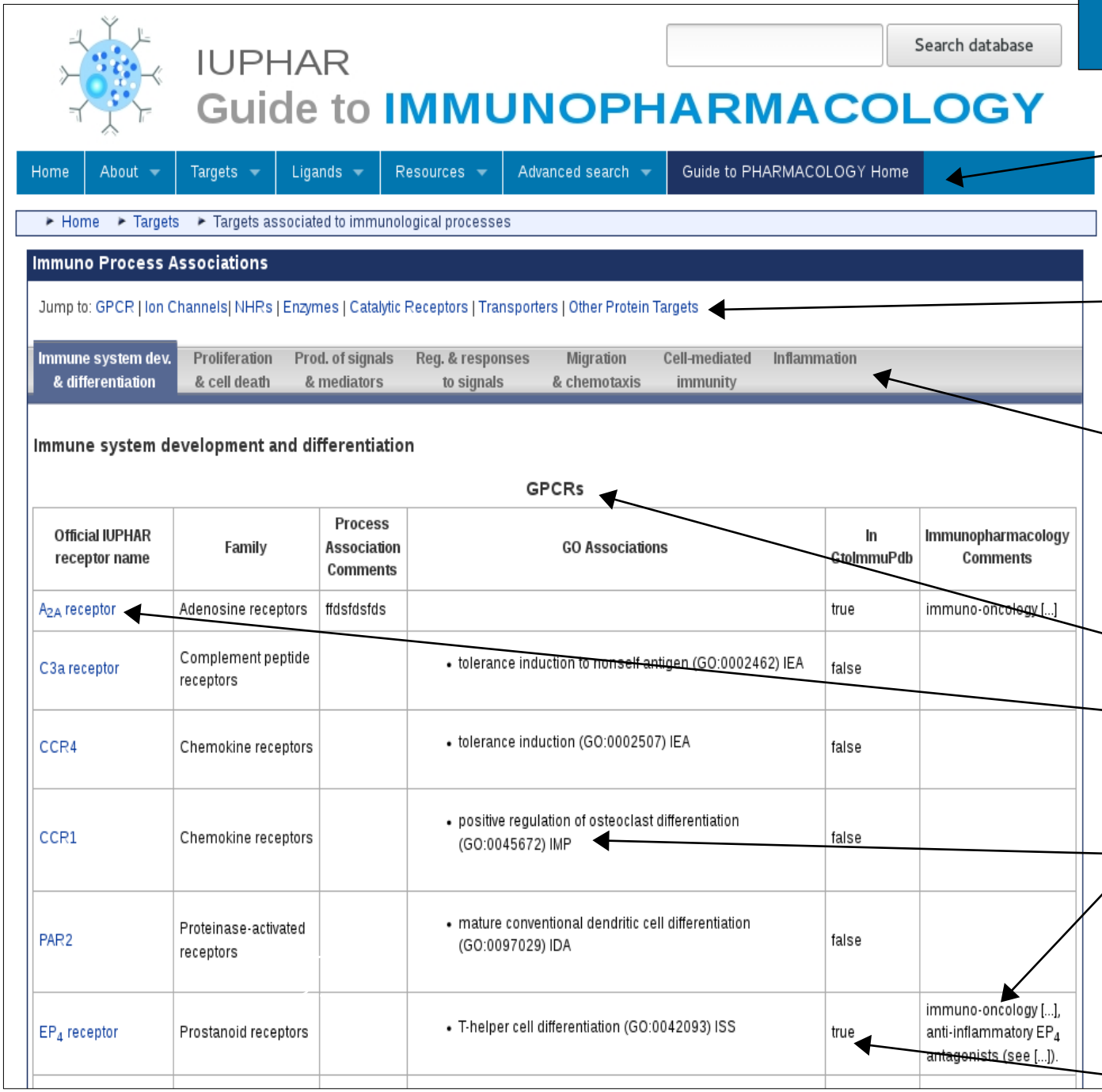
Immuno Process Associations
Each sub-section gives details of the association between the target and the GtoImmuPdb top-level immune process category

Displays any associated Gene Ontology (GO) terms, IDs and GO evidence codes

Displays curator comments and references

GtoImmuPdb User Guide – Process Associations List Page

New page developed to specifically surface details of immune process associated to targets



IUPHAR
Guide to IMMUNOPHARMACOLOGY

Search database

Home | About | Targets | Ligands | Resources | Advanced search | Guide to PHARMACOLOGY Home

Home ▸ Targets ▸ Targets associated to immunological processes

Immuno Process Associations

Jump to: GPCR | Ion Channels| NHRs | Enzymes | Catalytic Receptors | Transporters | Other Protein Targets

Immune system dev. & differentiation | Proliferation & cell death | Prod. of signals & mediators | Reg. & responses to signals | Migration & chemotaxis | Cell-mediated immunity | Inflammation

Immune system development and differentiation

GPCRs

Official IUPHAR receptor name	Family	Process Association Comments	GO Associations	In GtoImmuPdb	Immunopharmacology Comments
A_{2A} receptor	Adenosine receptors	ffdsfdsfds		true	immuno-oncology [...]
C3a receptor	Complement peptide receptors		• tolerance induction to nonself antigen (GO:0002462) IEA	false	
CCR4	Chemokine receptors		• tolerance induction (GO:0002507) IEA	false	
CCR1	Chemokine receptors		• positive regulation of osteoclast differentiation (GO:0045672) IMP	false	
PAR2	Proteinase-activated receptors		• mature conventional dendritic cell differentiation (GO:0097029) IDA	false	
EP_4 receptor	Prostanoid receptors		• T-helper cell differentiation (GO:0042093) ISS	true	immuno-oncology [...], anti-inflammatory EP_4 antagonists (see [...]).

Uses the GtoImmuPdb header and menu-bar.

Quick links to each target class section of the table

Tabs to switch between the different GtoImmuPdb Immuno Process top-level categories

Table is broken up into each target class (here just showing GPCRs)

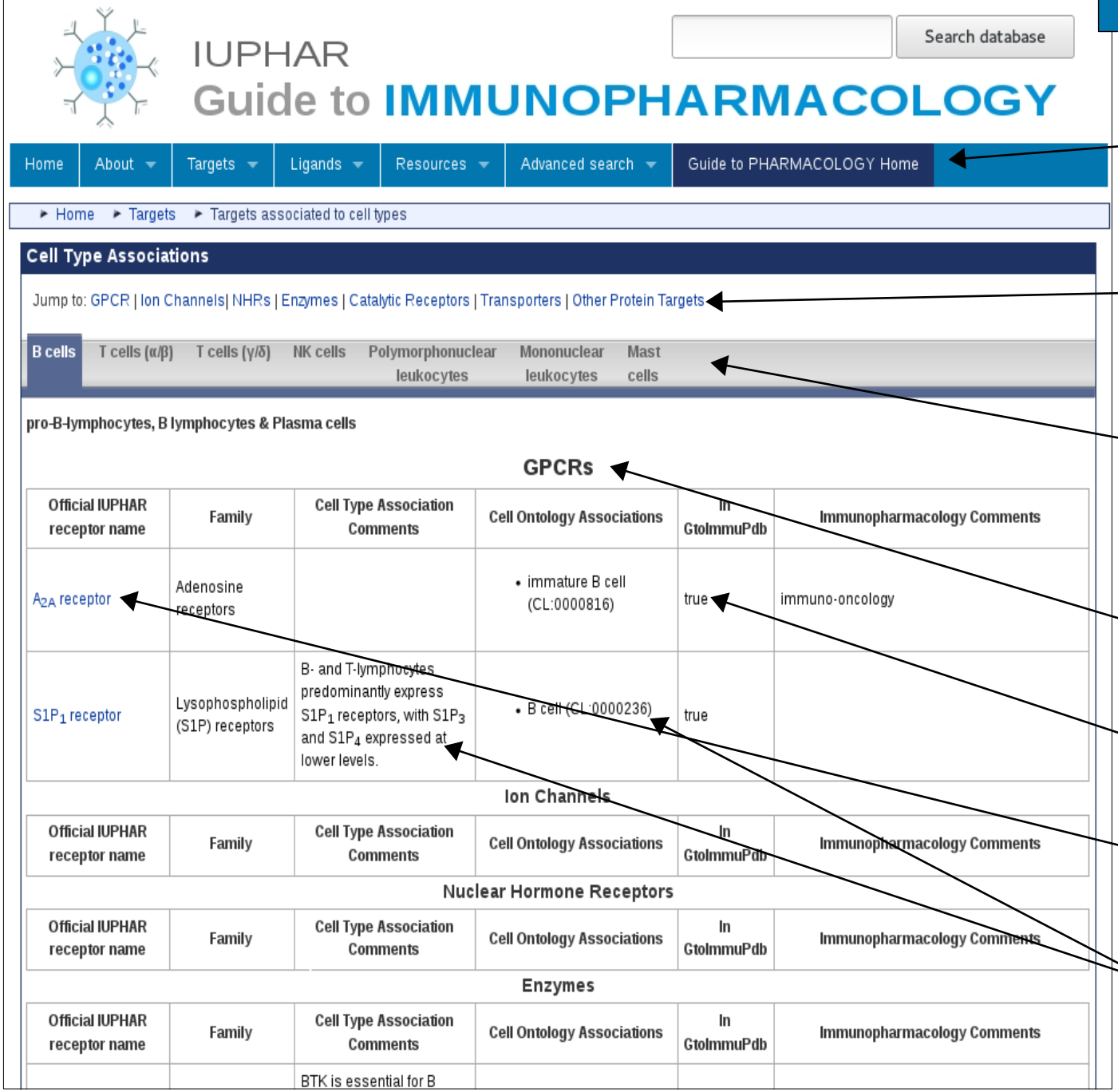
Includes target name linking to detailed view page

Shows comments & Gene Ontology (GO) associated terms

Indicates whether target has been manually tagged as being in GtoImmuPdb by curators

GtoImmuPdb User Guide – Cell Type Associations List Page

New page developed to specifically surface details of immune cell types associated to targets



Uses the GtoImmuPdb header and menu-bar.

Quick links to each target class section of the table

Tabs to switch between the different GtoImmuPdb Immuno Process top-level categories

Table is broken up into each target class (here just showing GPCRs)

Indicates whether target has been manually tagged as being in GtoImmuPdb by curators

Includes target name linking to detailed view page

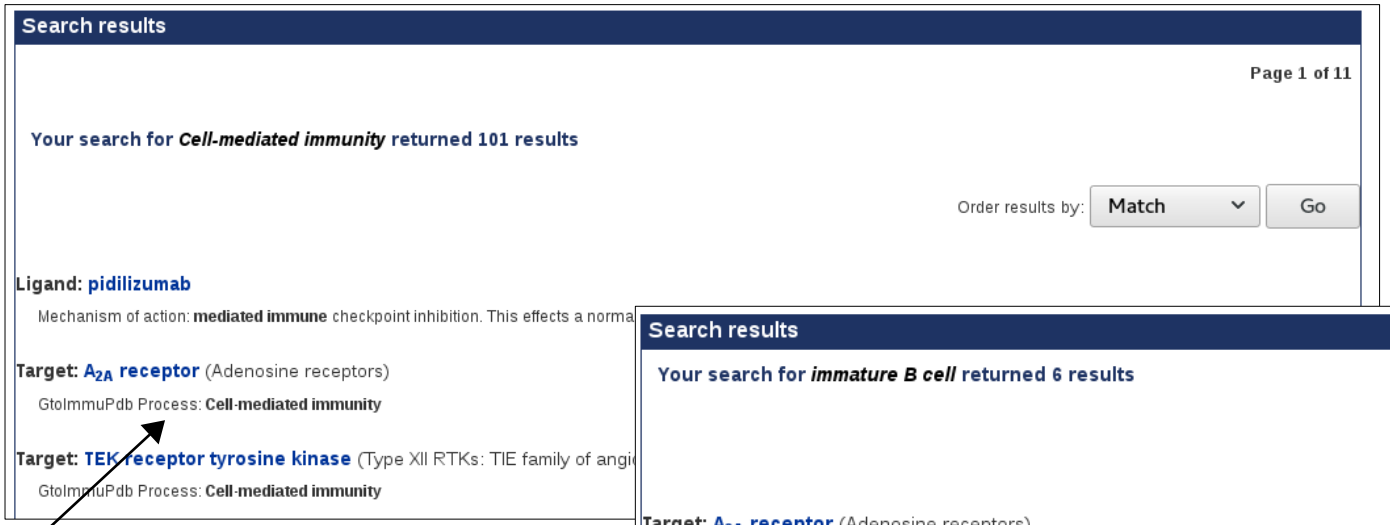
Shows comments & Gene Ontology (GO) associated terms

GtoImmuPdb User Guide – Site Search

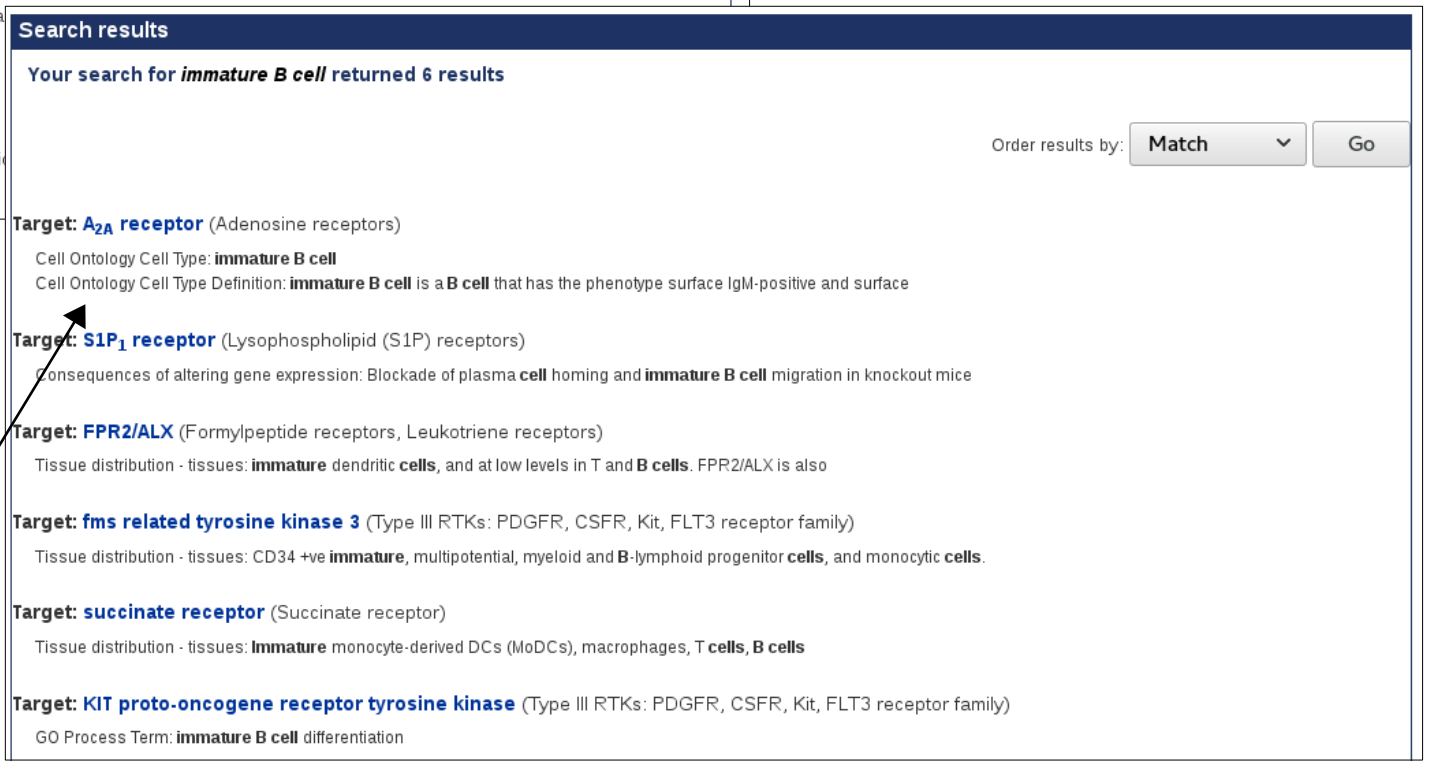
IUPHAR Guide to IMMUNOPHARMACOLOGY

Cell-mediated immunity | Search database

Search mechanisms have been developed to incorporated terms, IDs, comments and definitions for processes, cell types and their associations to targets.

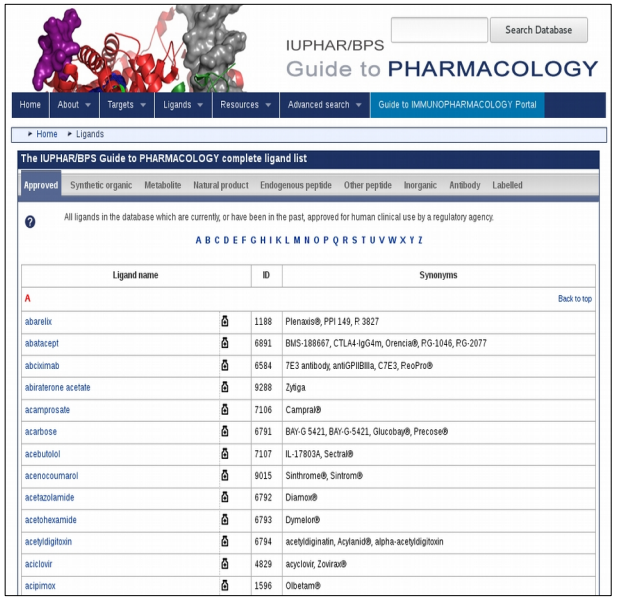


Example search results for 'Cell-mediated immunity'
Shows hit against target under GtoImmuPdb Process category



Example search results for 'immature B cell'
Shows hit against target under Cell Ontology Cell Type & Definiton

GtoImmuPdb User Guide – Other pages & future work



Currently no changes have been made to the ligand list page for GtoImmuPdb. So users see the same as you get for GtoPdb.

Other sections on the GtoImmPdb Portal for Disease and News are currently non-functioning – but represent feature that are planned for incorporation before the beta-release in Spring 2017.

The menu-bar will be further developed so for GtoImmuPdb views the links are more relevant and provide access to information about the project and GtoImmuPdb specific help.