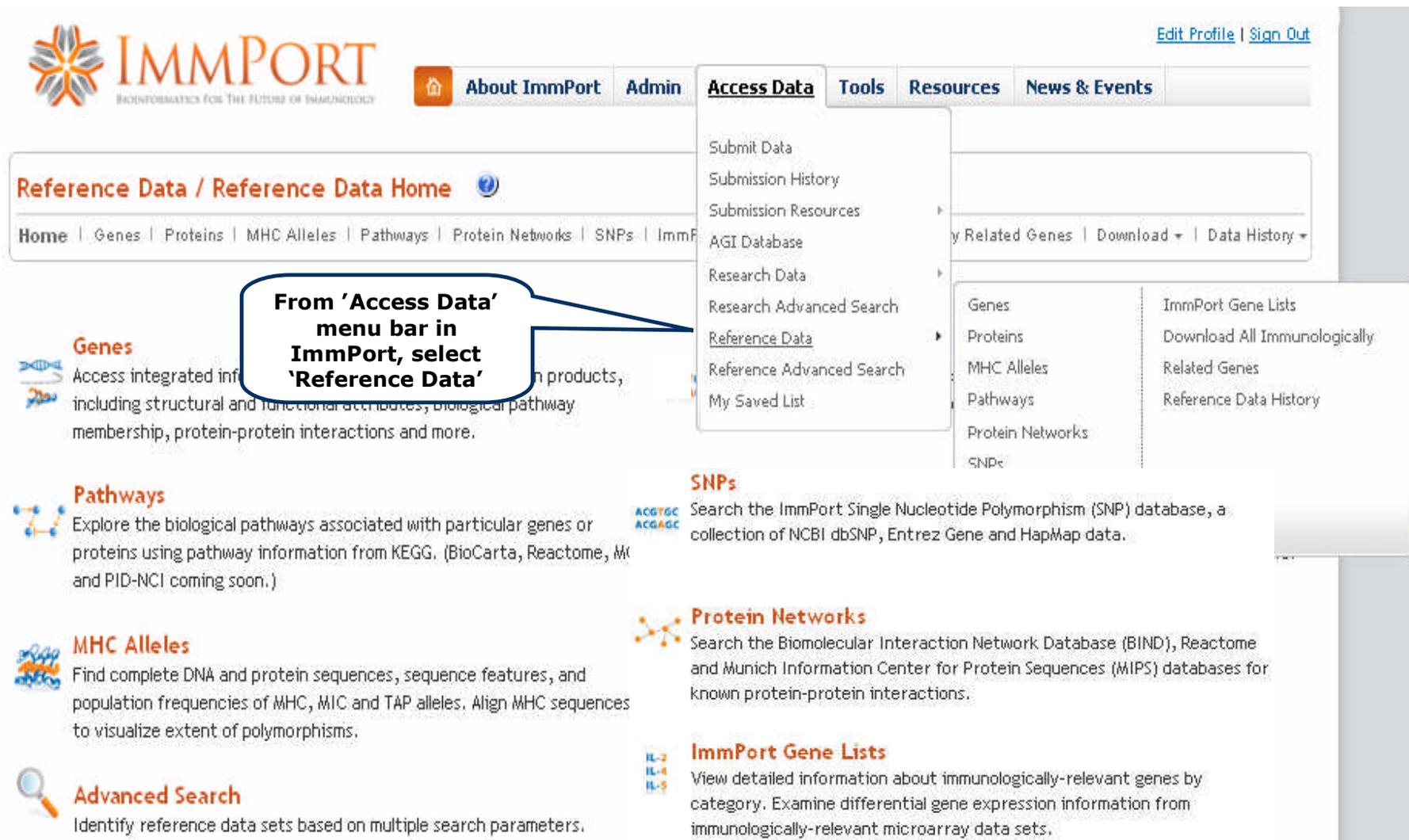


## Introduction

To search Reference Data for Genes, Proteins, Pathways, Protein Network, SNP, and ImmPort Genes in ImmPort model, click Access Data and select Reference Data on the ImmPort homepage .



**From 'Access Data' menu bar in ImmPort, select 'Reference Data'**

**Genes**  
Access integrated information on gene products, including structural and functional attributes, biological pathway membership, protein-protein interactions and more.

**Pathways**  
Explore the biological pathways associated with particular genes or proteins using pathway information from KEGG. (BioCarta, Reactome, MIM and PID-NCI coming soon.)

**MHC Alleles**  
Find complete DNA and protein sequences, sequence features, and population frequencies of MHC, MIC and TAP alleles. Align MHC sequences to visualize extent of polymorphisms.

**Advanced Search**  
Identify reference data sets based on multiple search parameters.

**SNPs**  
Search the ImmPort Single Nucleotide Polymorphism (SNP) database, a collection of NCBI dbSNP, Entrez Gene and HapMap data.

**Protein Networks**  
Search the Biomolecular Interaction Network Database (BIND), Reactome and Munich Information Center for Protein Sequences (MIPS) databases for known protein-protein interactions.

**ImmPort Gene Lists**  
View detailed information about immunologically-relevant genes by category. Examine differential gene expression information from immunologically-relevant microarray data sets.



# ImmPort Reference Data

## About Reference Data

Reference data in the ImmPort system represent a careful selection of immunology-related data from well-established public data sources. These data are integrated and organized into topical areas of interest for easy retrieval. Below are the sources used for the ImmPort system's reference data. The Reference Data History link at the side navigation of the reference data query module provides the dates the reference data were extracted from the original sources and the dates they were made available in the ImmPort system.

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