ASSISTANCE: HOW TO SEARCH THE DERMAGENE DATABASE

Home Page

The DermaGene Home-page exhibits a query form that allows users to perform selective querying, enabling them to apply multiple filters and subsequently obtain the desired records. The Query form enables users to search across multiple Dermatological disorders by searching either through Gene name, SNP, Ethnicity, PubMed ID or selecting from the Disease name and disease class drop down menu.

Database Filters

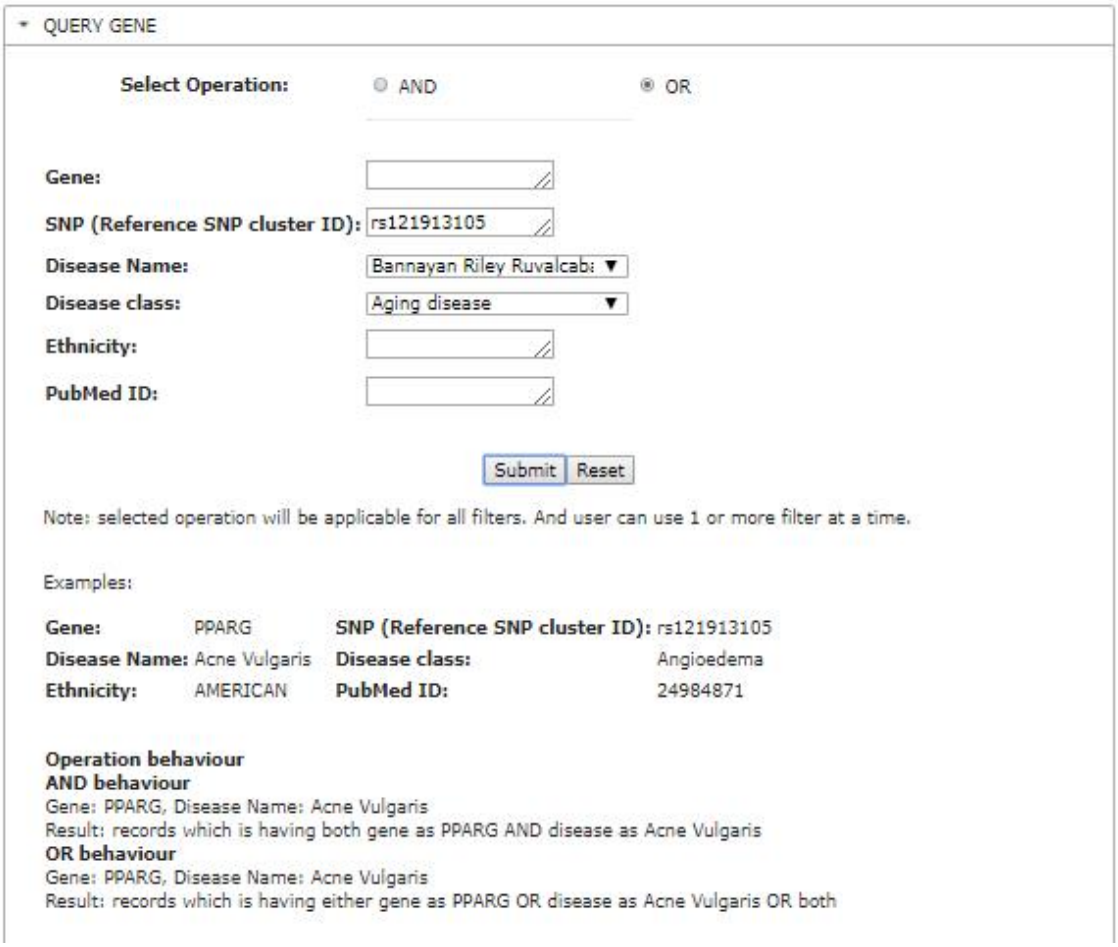
DermaGene enables users to extract specific records through application of correct queries:

Query	Results
Genes	Filters records based on HGNC gene symbols. The database can suggest gene names as one continues to type the complete gene name.
SNP (Reference SNP cluster ID)	Filter records based on rsIDs
Disease Name	Select the dermatological disease from the provided drop-down menu.
Disease Class	Records can be restricted to only the subset that has disease-SNP associations from a particular disease class.
Ethnicity	Records can be filtered based on the population ethnicity. Select the ethnicity from the dynamic drop down menu provided which provides suggestions as you type in the search box.
PubMed ID	Relevant data can be extracted using the unique identifier provided by PubMed

Functionality

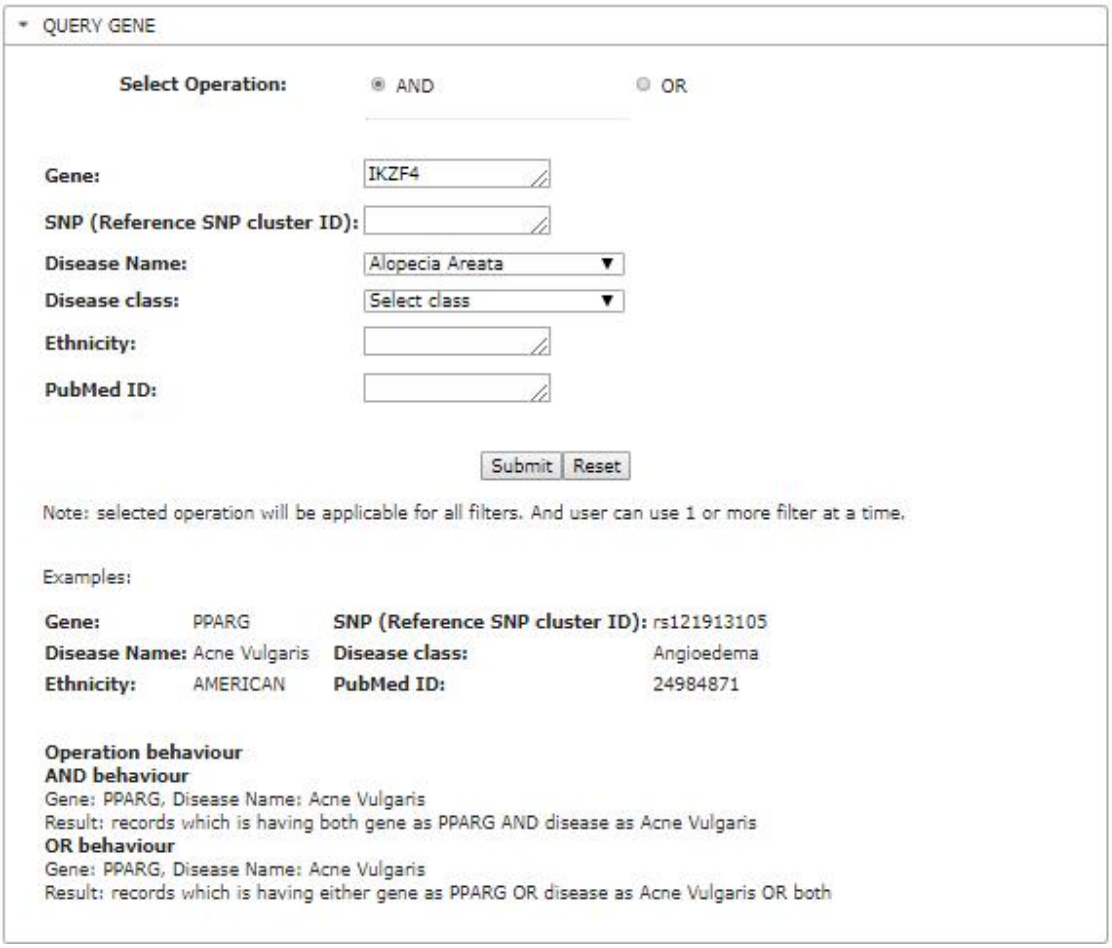
Users can opt for AND & OR functionality provided by our database.

1. OR Functionality: User can obtain results using either of the filters provided in the database. Example: Upon querying, SNP (Reference SNP cluster ID) = rs121913105; Disease Name= Bannayan Riley Ruvalcaba syndrome; Disease class = Aging disease, we obtain the set of values that represents either of the specified criteria, the result shown below:



Disease Name	Gene	SNP	PubMed ID	Ethnicity	P-value	Class
Acanthosis Nigricans	FGFR3	rs121913105	10053006	AMERICAN	0.014	Skin and Connective Tissue Disease
Bannayan Riley Ruvalcaba syndrome	PTEN	rs121909221	27489861	N.A	0.454	Neoplasia
Hutchinson Gilford progeria syndrome	LMNA	rs60652225	12927431	MULTI-ETHNICITY	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs60310264	12714972	N.A	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs60310264	21941106	N.A	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs28928902	12768443	CAUCASIAN	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs28928902	16772334	N.A	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs58912633	15622532	GERMAN	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs58912633	17881656	GERMAN	0.627	Aging disease
Hutchinson Gilford progeria syndrome	LMNA	rs58912633	25738644	GERMAN	0.627	Aging disease

2. AND Functionality: Users can obtain specific results by providing defined queries, thereby getting selective results. Example: Upon querying Gene=IKZF4 & Disease Name = Alopecia areata, we get selective results that satisfy both the criteria, but not any one individually. The results are as shown:

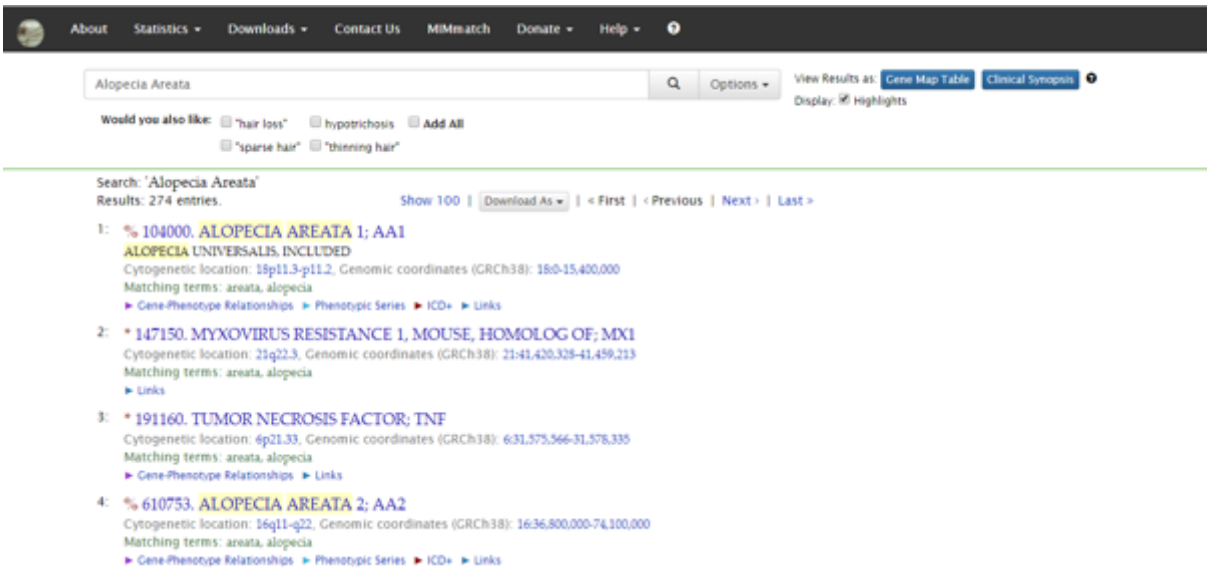


Disease Name	Gene	SNP	PubMed ID	Ethnicity	P-value	Class
Alopecia Areata	IKZF4	rs1701704	20596022	MULTI-ETHNICITY	0.242	Auto-immune disease
Alopecia Areata	IKZF4	rs1701704	20596022	MULTI-ETHNICITY	0.002	Auto-immune disease
Alopecia Areata	IKZF4	rs1701704	20596022	EUROPEAN	0.243	Skin and Connective Tissue Disease

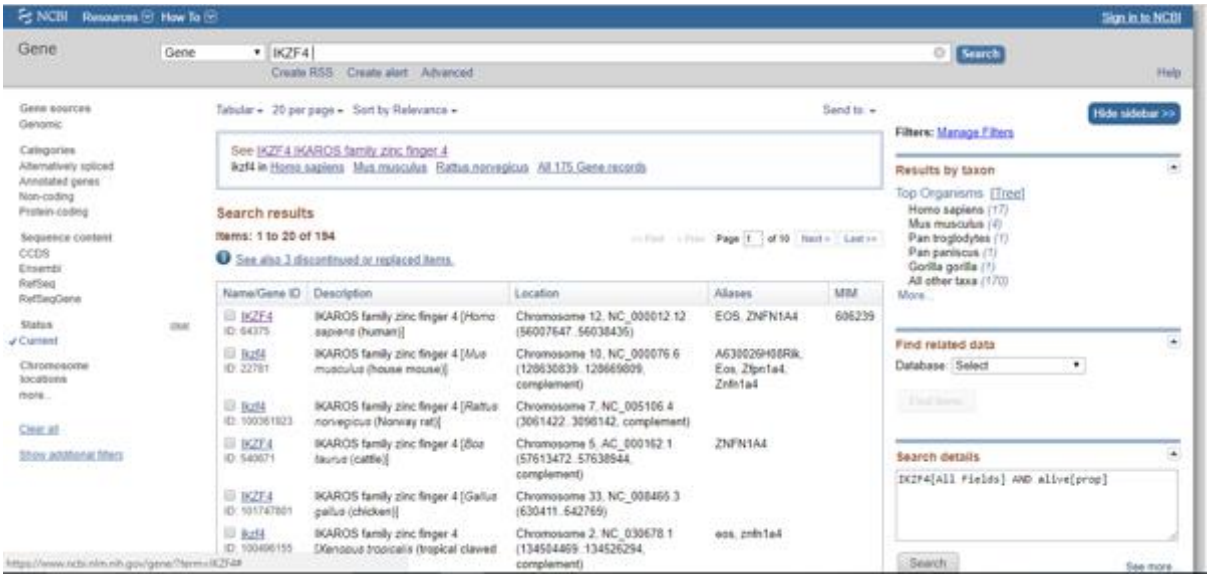
Hyperlinks to websites

Every entry in the database provides links to associated WebPages for Disease, Genes, SNPs & PubMed IDs.

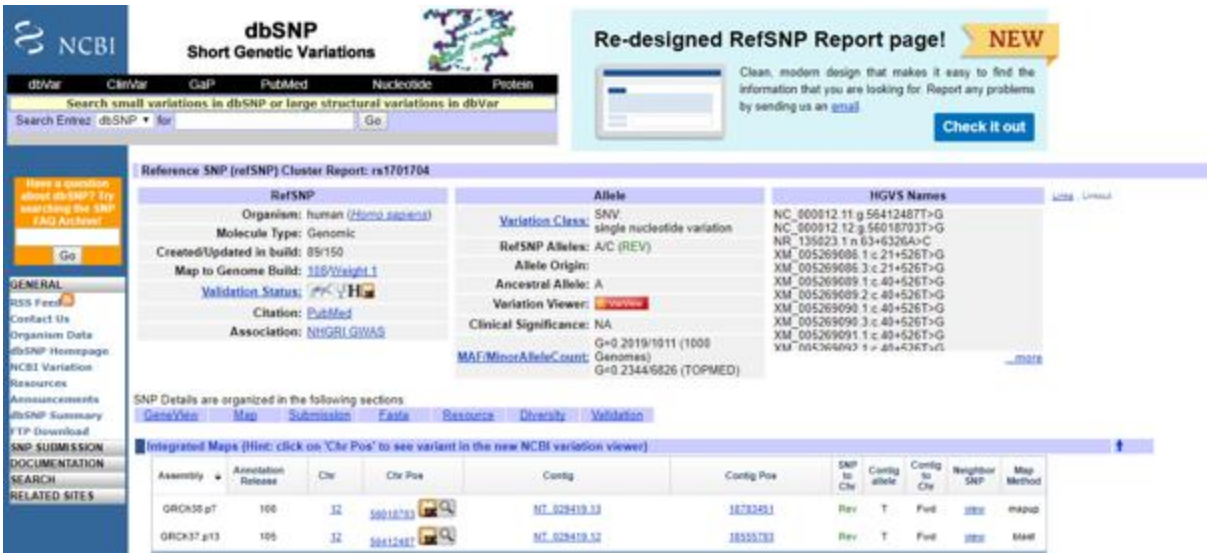
1. Clicking under 'Disease Name', e.g. ***Alopecia Areata*** opens OMIM webpage, where users can browse through data available about this disease.



2. Clicking under 'Gene', e.g. ***IKZF4*** opens NCBI webpage, where users can browse through data available about this Gene.



3. Clicking under 'SNP', e.g. ***rs1701704*** opens NCBI-dbSNP webpage, where users can browse through data available about this SNP.



4. Clicking under 'PubMed ID', e.g. ***20596022*** opens NCBI-Pubmed webpage, where users can browse through literature source discussing the disease.