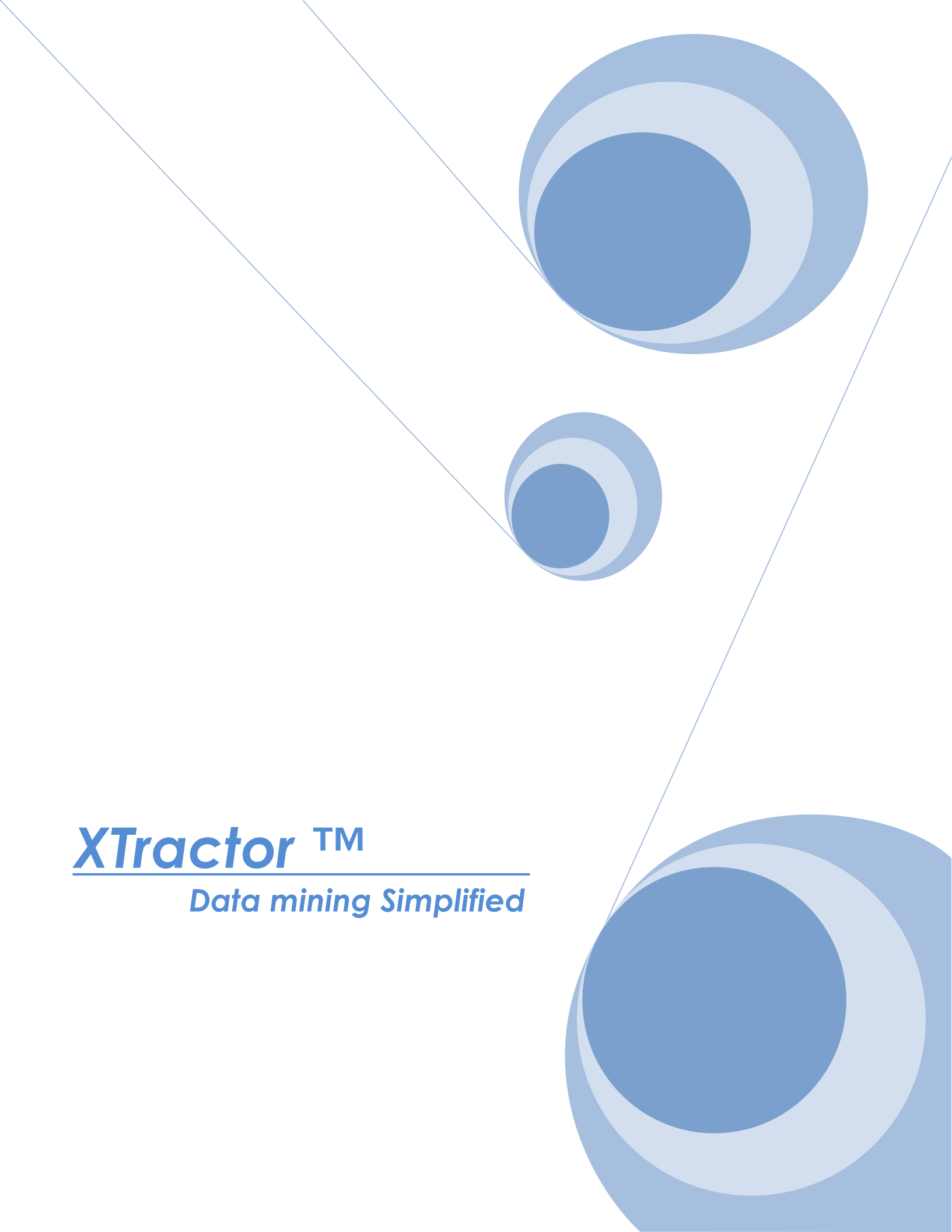

XTractor ™
Data mining Simplified

DID YOU KNOW THAT YOU COULD DO ALL THIS AND MUCH MORE WITH XTractor

ABSOLUTELY FREE?

-------XTractor™ Features-------

Register for free at: www.xtractor.in

Version	**1.0**
Operating systems	**WIN/MAC**
Free access	Yes
Installation Required	No (Web based system)
Best Viewed in	Browsers Mozilla Firefox 1.5+ and in 1024*768 resolution, IE 7.0+, Sarfari 3.1
Program the same for all platforms	Yes
Access Policy	
Access anytime Anywhere	Yes
Network building	Yes
Sharing data with friends & colleagues	Yes (Unlimited)
Queries and Keywords	
Number of Queries allowed	5 (Maximum)
Number of Keywords allowed	10 (Maximum)
Alert updates	**Weekly/ fortnightly/monthly**
Database statistics	
Number of facts with Proteins	24068
Number of facts with	12434

Diseases	
Number of facts with Drugs	1727
Number of facts with Biological Process	2773
Daily updates on an average	600
Number of Relationships	12420
Total facts	24273
Regular stats for user queries on home page	Yes
Managing Data & Query Options	
Associated entities	Yes (Check the correlations across entities)
Pie Chart Display	Yes
Tag cloud	Yes (Identifies high frequency entities)
Search with in results	Yes (Searches any entity)
Saving results	Yes
Organize Data	Yes (Query results can be mixed and customized data files created)
Add queries	Yes (Uses Boolean operators)
Instant filter option	Yes
Highlight option for entities	Yes
Emailing chosen abstract to friend	Yes
Sharing data	
Read Only access	Yes
Sharing of database via www?	Yes
Multiple, simultaneous database users	Yes
Add tags	Yes
Collaborate	Yes
Invite a friend	Yes
Data generation	

100% manually validated	Yes
Sentences categorised to respective classes	Yes
Highly accurate data	Yes
Annotated sentences and abstracts from PUBMED get stored in user profile	Yes
Data customization	
Change queries multiple times	Unlimited
Annotation Out Linking	
SwissProt	Yes
Drug bank	Yes
MeSH	Yes
Gene Ontology	Yes
PUBMED	Yes
Support	
Reference Guides/ Manuals	Yes (Plus Online Help; Product highlights)
Tutorials	Yes (Case studies; Quick movie)
Email or Telephone Support	Yes (Immediate) (Mail :xtractor@molecularconnections.com)
Training	Yes (Web-based site tour)
Demo	Yes

UPCOMING FEATURES OF XTRACTOR!

Export Options
Integrating XTractor data with existing user applications through web services
Exporting data to or in XML format
Creating customized database at user's personal desktop
Semantic Search
Ontology based advanced search engine that enables conducting complex queries across multiple layers of ontologies

Bibliographic search
Conducting bibliography- based searches; e.g.: Search by author, institution etc.
Concept Linking
Feature that enables making assumptions by linking data from multiple abstracts, and discovering facts, hitherto unpublished.
Standard Search
Searching through data using the Molecular Connections set of "standard keywords" to get better results
Archived Data Search
Searching all the data that has been archived throughout XTractor.

For further details, visit: *www.xtractor.in*

Inferences from XTractor on APOE and its relations to Atherosclerosis

Purpose of the Analysis:

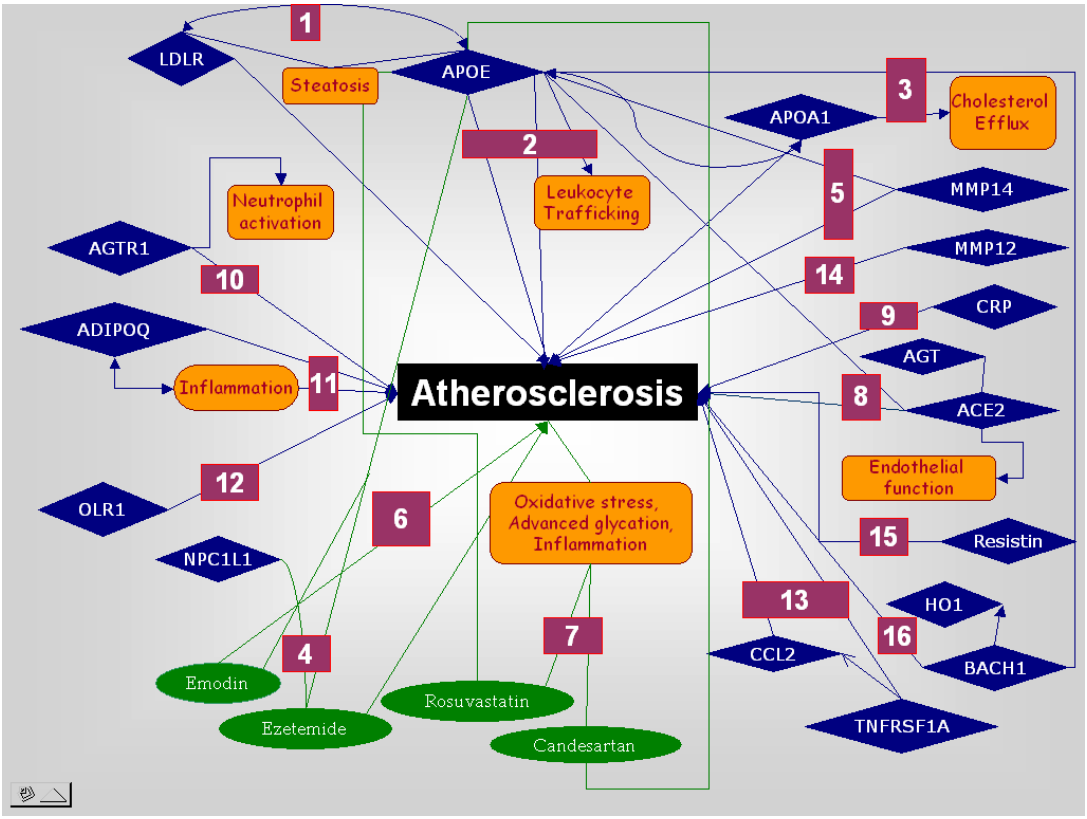
- Study the biology around APOE in terms of interacting and influencing proteins
- Relationships between APOE and Atherosclerosis
- Process that play a major role in the disease condition
- Atherosclerotic drugs and their relations to APOE

It took **less than 30 minutes** to make the below mentioned inferences from XTractor.

Compared to the conventional Database systems we provide you with the **flexibility** to store/save, display and tag the categorized facts based on your own preference.

Customize the data that you require, instead of having to search through multiple complex databases.

Stay current with the **latest manually annotated relationships** across proteins, drug, biological processes and diseases as they get published



Data References for the Map above: *(Each of these sentences was summarized from multiple handpicked sentences in XTractor)*

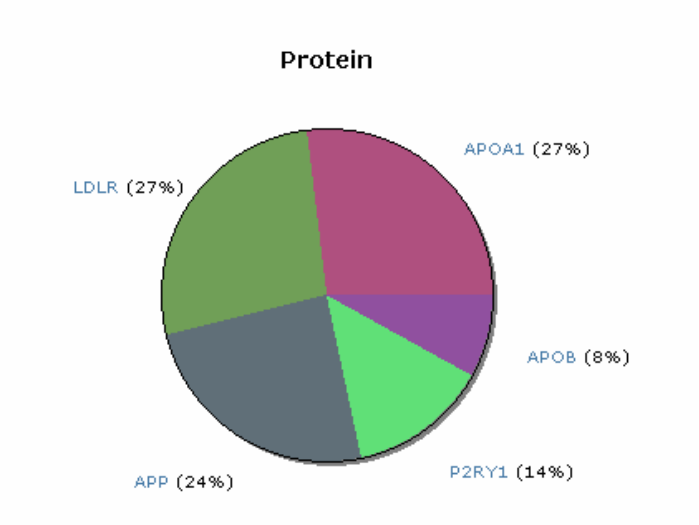
- APOE clearance is directed thro LDLR. Absence of LDLR and APOE Leads to steatosis with severe inflammation characterized by infiltration of macrophages and increased nuclear factor kappaB (NF-kappaB) signaling
- APOE plays a role in leukocyte trafficking in atherosclerosis. Apolipoprotein E (ApoE) is an important component of plasma lipoprotein with anti-atherosclerosis function
- APOA1 increases cholesterol efflux and reduces atherosclerosis in co-operation with APOE via up regulation of ABCA1 and ABCG1. Targeting APOA1-APOE interaction could form the basis of cell based therapy for atherosclerosis
- Ezetemide prevents atherosclerosis by decreasing plasma cholesterol levels in absence of APOE and NPC1L1
- MMP14 promotes the development of hyperlipidemia and atherosclerosis by degrading APOE
- Emodin stabilizes atherosclerotic plaques in aortic root via its anti-inflammatory action in absence of APOE
- Rosuvastatin and Candesartan attenuate atherosclerosis in absence of APOE via effects on advanced glycation, oxidative stress and inflammation
- ACE2 improves endothelial function in AGT dependent manner in absence of APOE via attenuation of NADPHox-induced ROS production. ACE2 enhances plaque stability and reduces atherosclerosis

- CRP levels increase in arterial intima during atherosclerosis. Targeting CRP by CRP-Pet complex is effective approach to capture native LDL to prevent development of atherosclerosis
- Transgenic AGTR1 improves atherosclerosis by normalization of dysregulated neutrophil activation
- High ADIPOQ is inversely related to systemic inflammation and is protective factor in atherogenesis
- Lectin-like oxidized low-density lipoprotein receptor-1 (LOX-1) plays an important role in atherosclerosis and is found to be an endothelial cell receptor for AGEs.
- p55 TNFR contributes to development of atherosclerosis by enhancing lesional foam cell formation and by promoting the expression of MCP-1
- MMP12 accelerates the initiation of atherosclerosis and stimulates progression of fatty streaks to fibrous plaques in transgenic rabbits
- Resistin in serum is associated with high risk in patients with atherosclerosis
- Disruption of Bach1 gene in Apo E KO mice caused inhibition of atherosclerosis through up regulation of HO-1

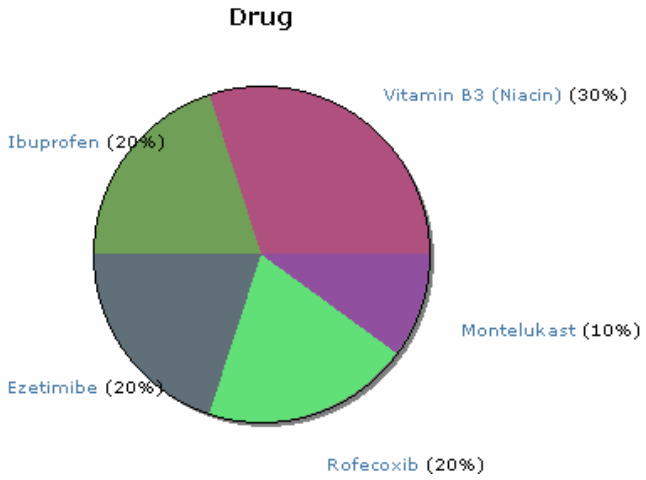
How did we arrive at this analysis in 30 minutes?

Step 1:

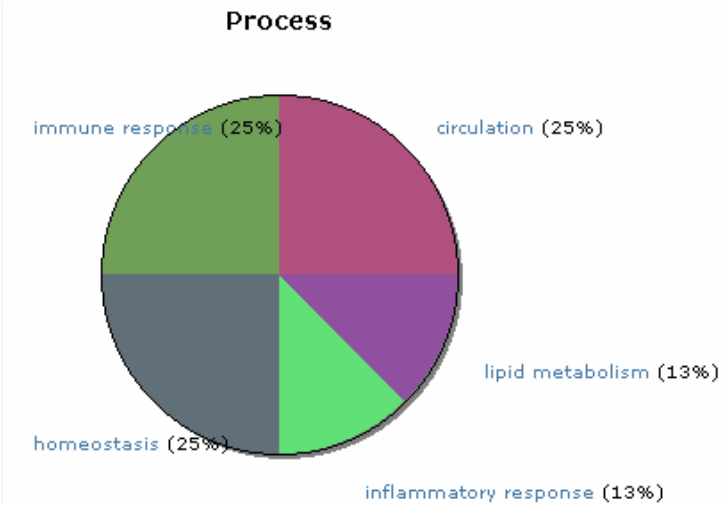
Instant Analysis: *XTractor gives instant top statistics for your queried entity, here APOE*



Top 5 Proteins associated with APOE
%s indicate the number of manually handpicked annotated sentences for each combination
EG: 27% of the sentences in XTractor talk about APOE and APOA1



Top 5 Drugs associated with APOE
%s indicate the number of manually handpicked annotated sentences for each combination of drug and protein

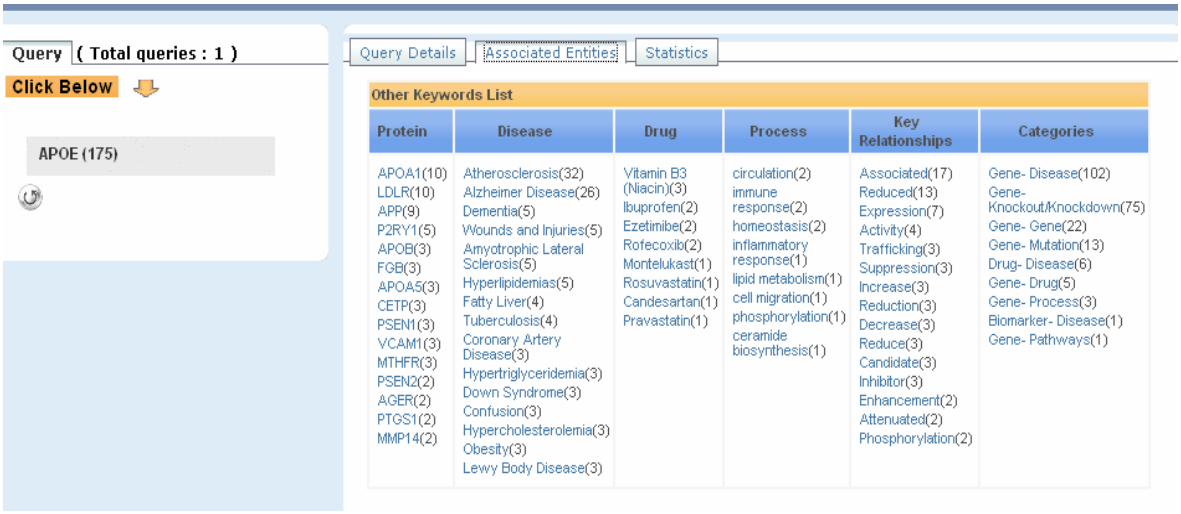


Top 5 Biological Processes associated with APOE
%s indicate the number of manually handpicked annotated sentences for each combination of processes and protein

Step 2:

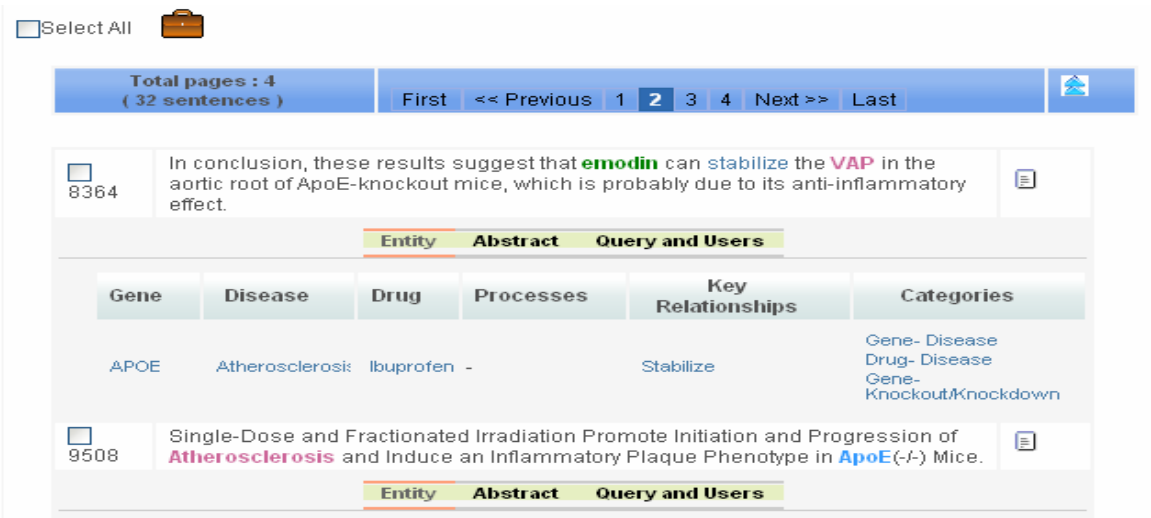
Tabular Data Representation:

- **Analyze and Refine by going through the Associated entities map for APOE,**
- **Click on each of the entities below displays the annotated sentences**



Sentence Display Panel:

- **Annotated entities highlighted and linked to Public databases.**
- **Each sentence is also categorized into Gene-Drug, Gene- Marker or other relationships manually**
- **Also select the sentences and save them in folders – named as per your preference.**



Step 3:

Search within results:

- Search your collection of sentences at ease
- Refine and filter your required facts faster