(6/12/2017)

Search Pathways

From the **Find Functions** top-level menu, the **Search Pathways** option on the second-level menu leads to pathway and compound search and browsing as shown in Figure 1(i) and Figure 2(i), respectively.

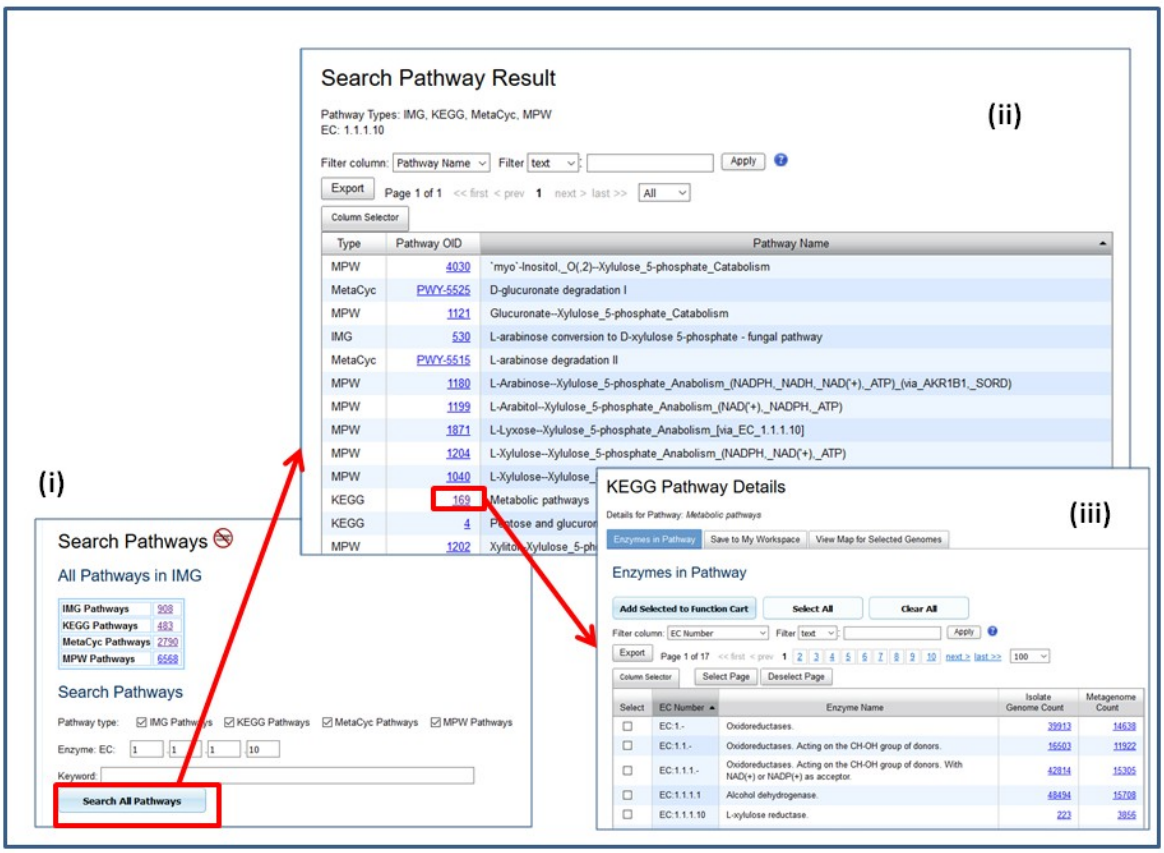

Figure 1. Search Pathways

At the top of the **Search Pathways** section, there is a list of 4 types of pathways in IMG (IMG, KEGG, MetaCyc, MPW) and their corresponding pathway counts. Clicking on the **IMG Pathways** count will lead to the IMG Pathway Browser function, and clicking on the **KEGG Pathways** count will lead to the KEGG Pathway Browser function, etc. Please refer to the corresponding features and documents in **Find Functions**.

A user can select the types of pathways he/she wishes to search, and specify a search condition on enzyme and/or keyword. For example, entering EC:1.1.1.10 in the Enzyme EC filter in Figure 1(i) will lead to the result of all pathways in IMG database associated with EC:1.1.1.10 as shown in Figure 1(ii). The user can view a pathway detail by clicking on the ID as shown in Figure 1(iii).

At the top of the **Compounds** section, there is a list of 4 types of compounds in IMG (IMG, KEGG, MetaCyc, MPW) and their corresponding counts (see Figure 2(i)). Clicking on the **IMG Compounds** count will lead to the IMG Compound Browser as shown in Figure 2(ii). Users can also browse KEGG, MetaCyc and MPW compounds by clicking the corresponding counts.

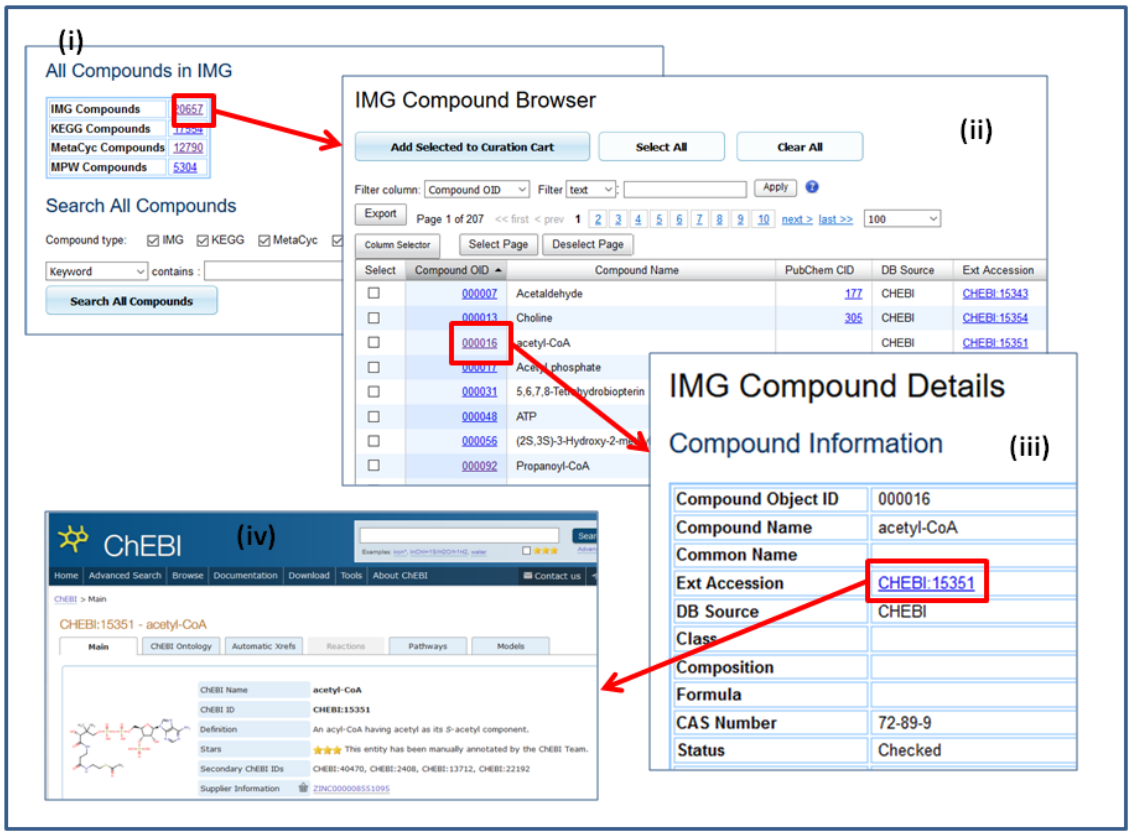

Figure 2. IMG Compounds.

Users can click on a compound ID to see more details. For example, Figure 2(iii) shows the detail page of IMG Compound *acetyl-CoA*. Clicking on external accession will lead to compound detail in other external sources such as ChEBI. Figure 2(iv) shows the detail page of the compound in ChEBI (URL: https://www.ebi.ac.uk/chebi/searchId.do?chebiId=15351).

Users can also search compounds by keywords. For example, a user can type " acetyl-CoA" in the keyword search field and click the **Search All Compounds** button (in Figure 3(i)) to view all matching compound names with the keyword highlighted in green (Figure 3(ii)). The user can click on the compound ID to view compound detail (Figure 3(iii)).

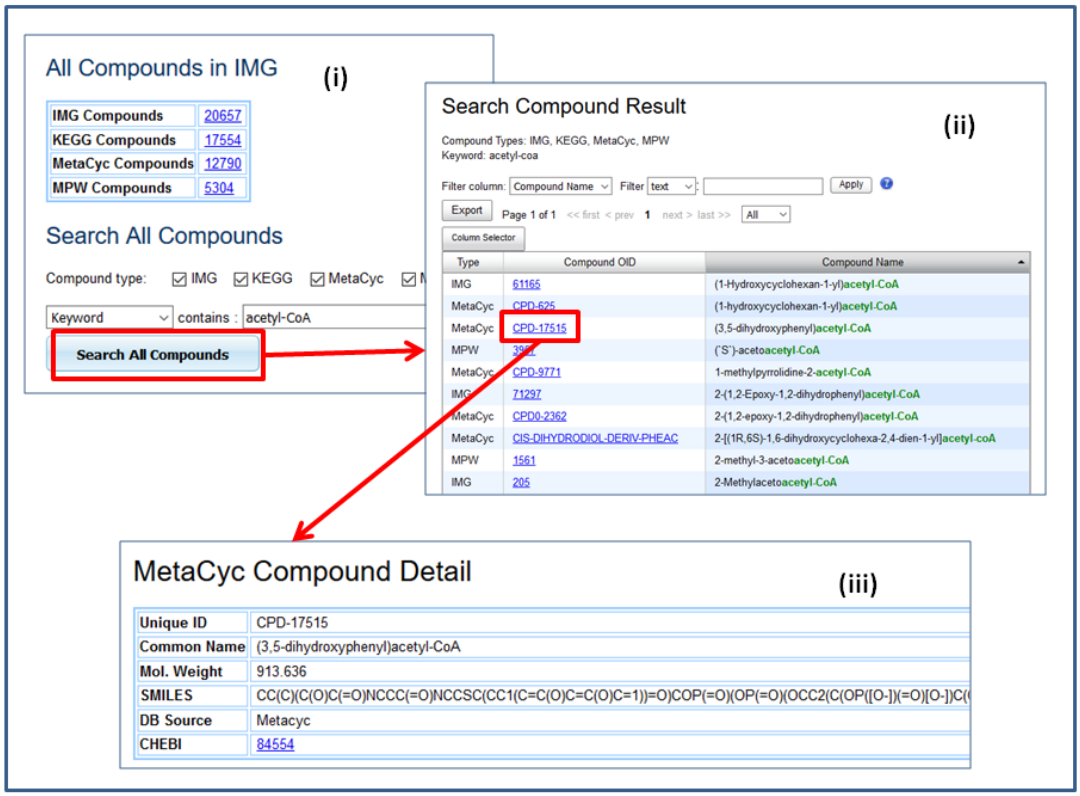

Figure 3. Search Compound by Keyword.

In addition to search by keyword, IMG also support searching using:

- CAS Number
- CHEBI ID
- KEGG LIGAND ID

Simply select the type from the drop down list, type in a keyword, and then click the **Search All Compounds** button to start searching.