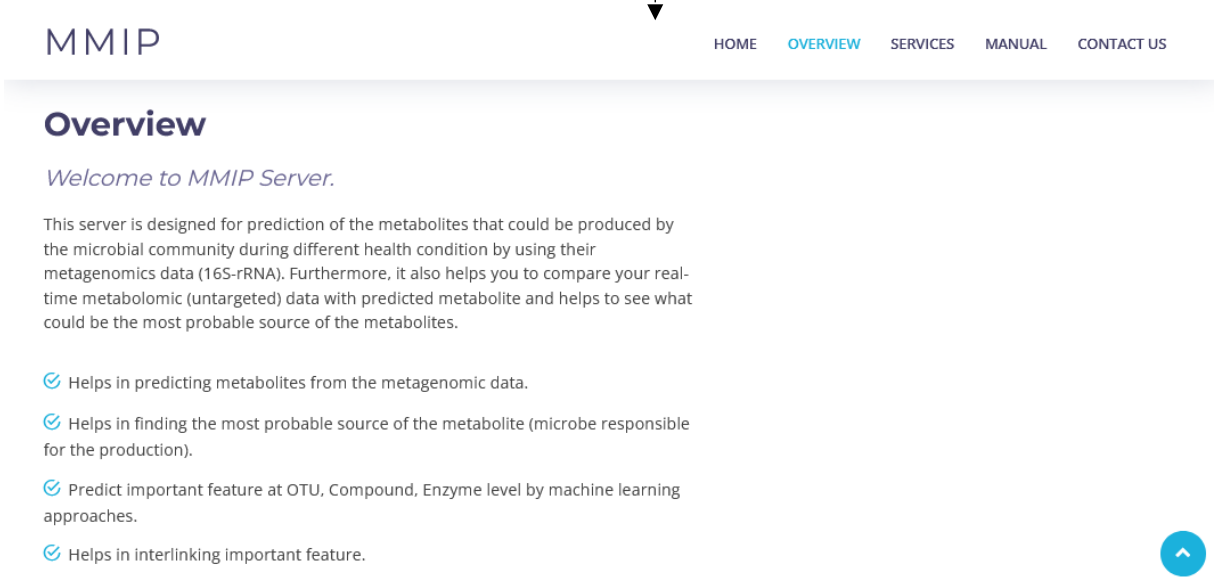
Notes:

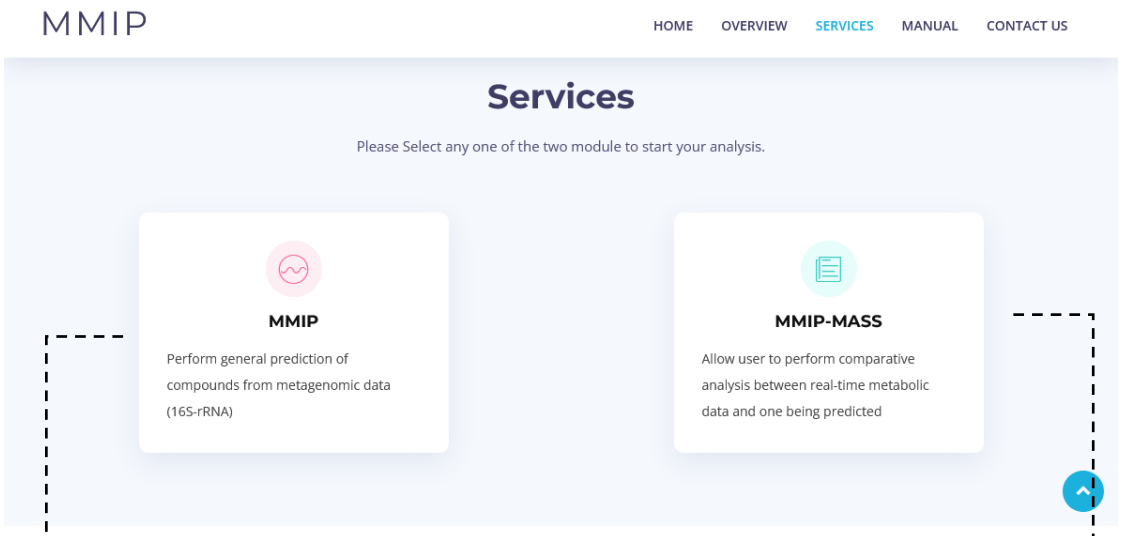
1. → [#] *Red arrow and number box indicates additional functionality.*
2. ------► *Black dotted arrow indicates feature information.*
3. *All the comparison and the analyses are between two groups (not more).*
4. *By the term "significant", statistical significance is referred to.*
5. *All the analysis diagrams are made using Plotly and will feature the following tools (as shown below) on the top right corner of each diagram, allowing the user to access features like zoom, edit, download and other interesting tools.*

HOME PAGE

Scroll Down the page to get the overview.



Click on Get Started to use the Respective Services.

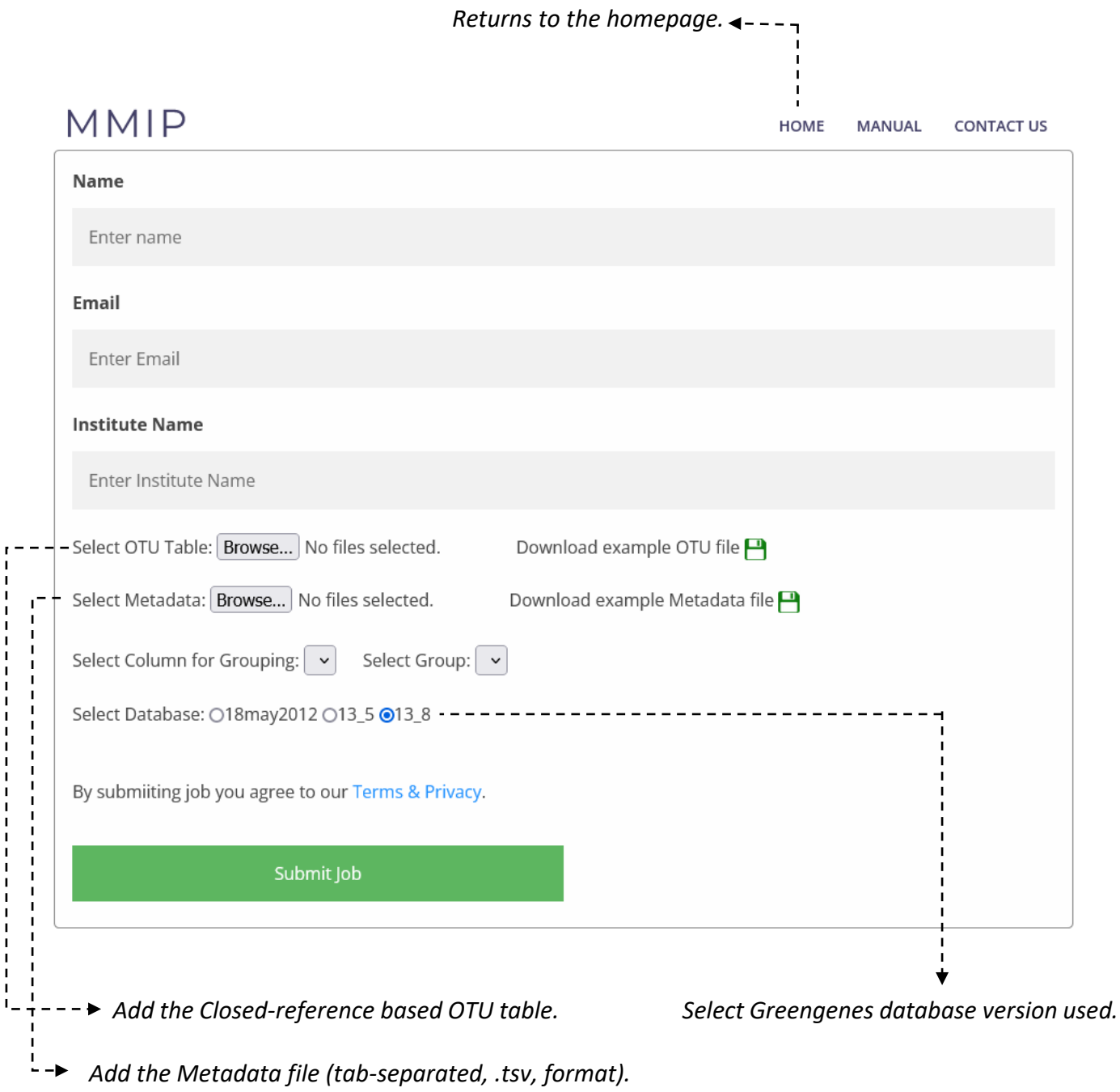


Click on either of the tabs to go to the respective "upload" pages.

(Fig. 1)

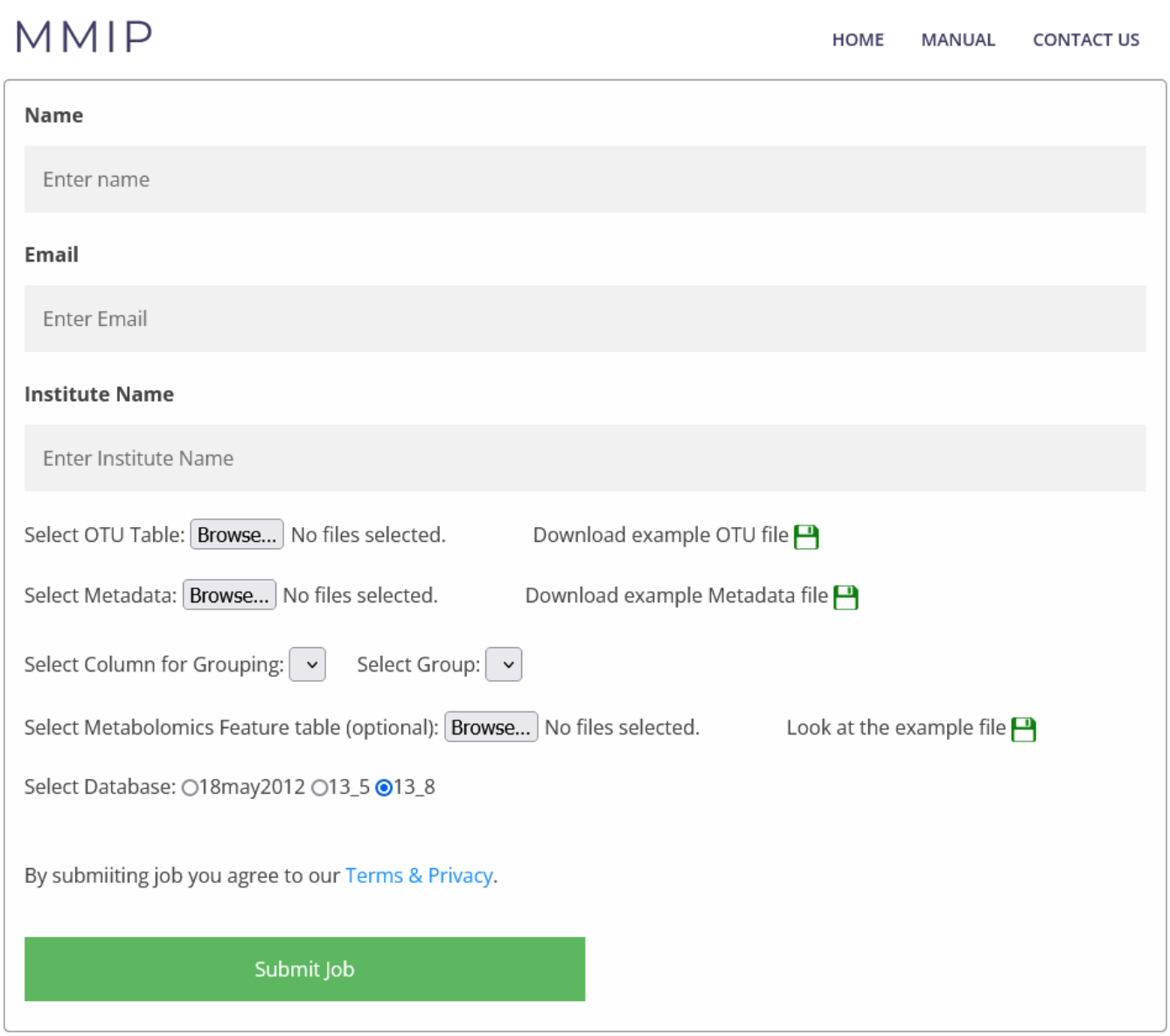
UPLOAD PAGES

MMIP:



(*Fig. 2*)

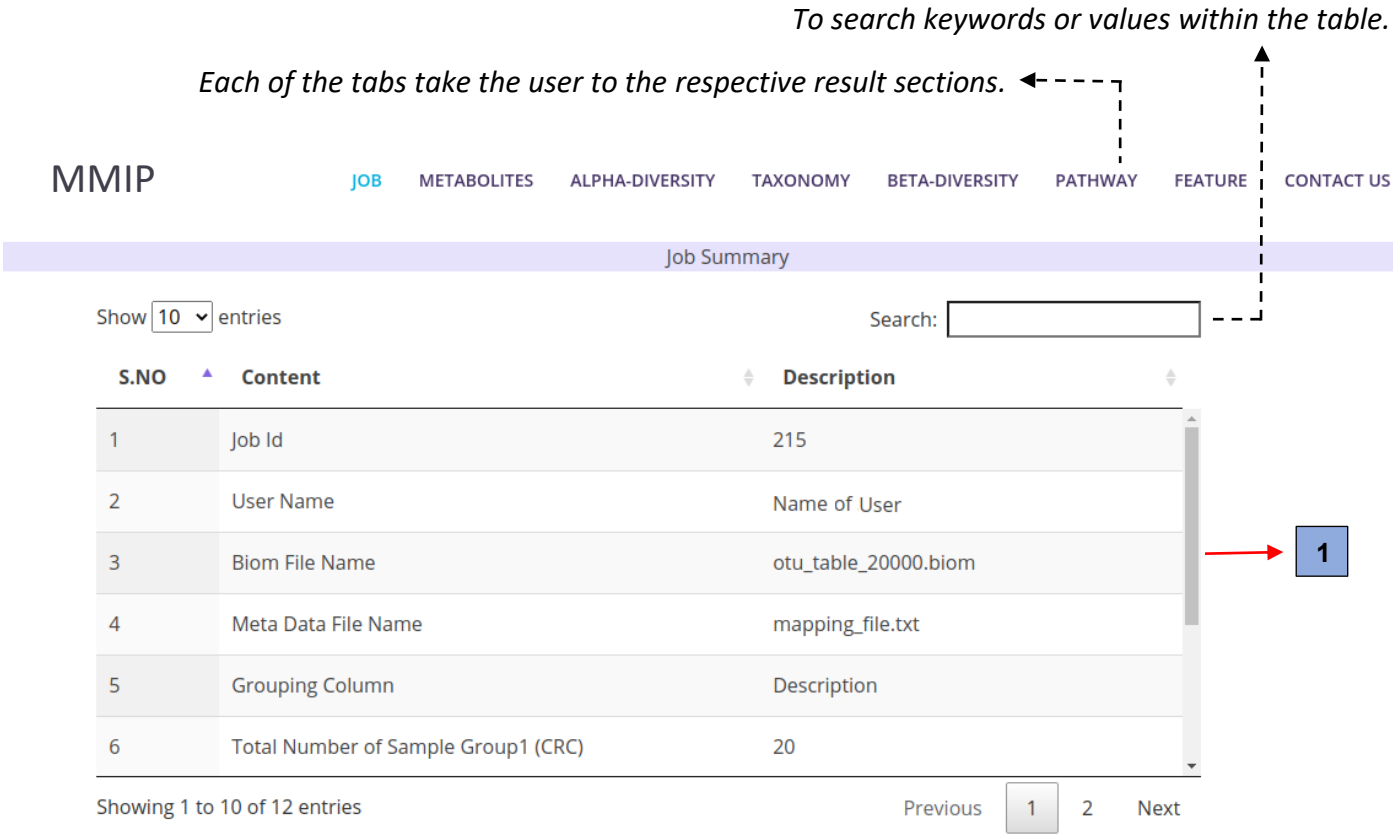
MMIP-MASS:



(*Fig. 3)*

RESULT PAGE

USER AND JOB-RELATED INFORMATION:



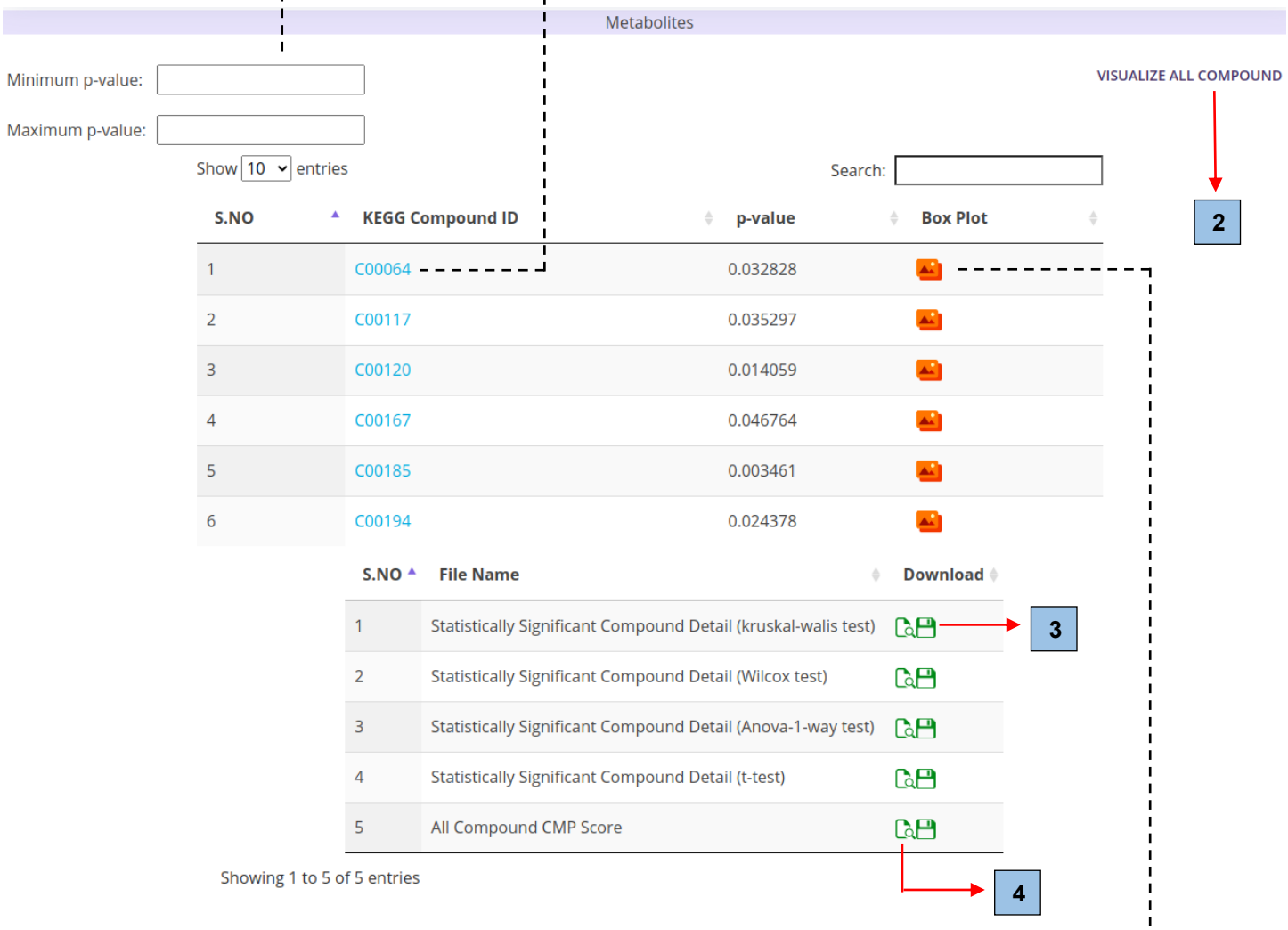
(*Fig. 4*)

1 *Scroll the table for additional information including number of samples in group 2, Institute name, email Id, start date, time and status of the job.*

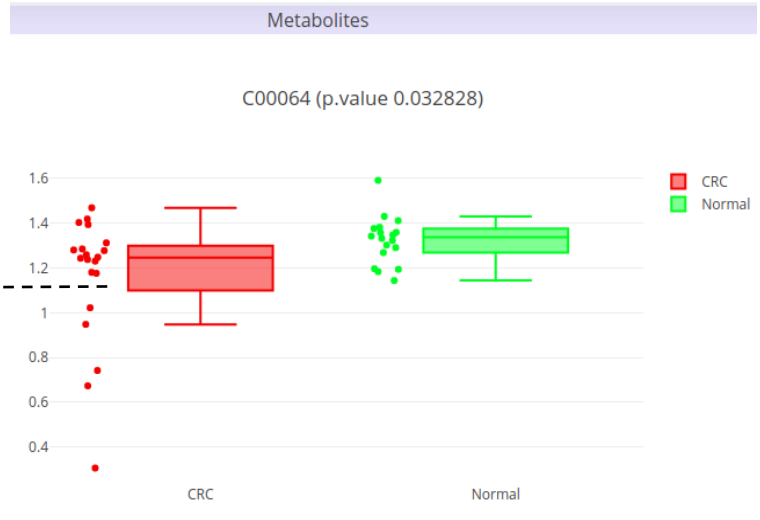
METABOLITES:

Add range of desired p values.

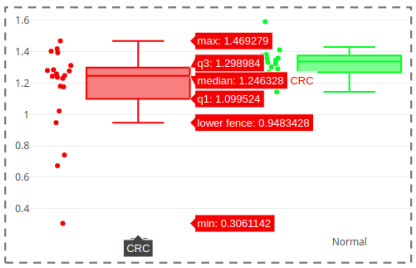
Click on the compound Ids to get to the KEGG page of the respective compound.



Click to get the boxplot of the compound in the same page (above the table).

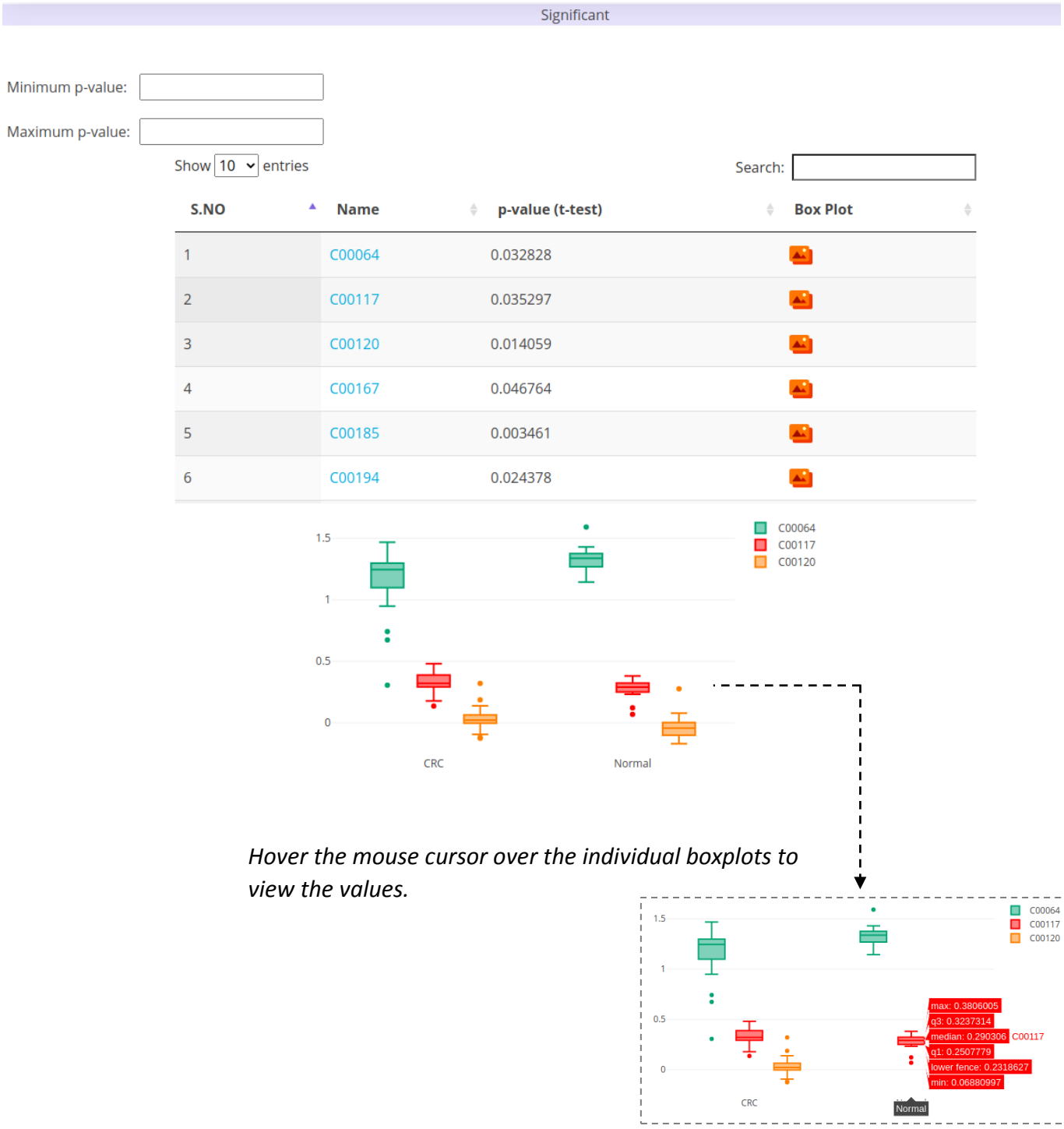


Hover the mouse cursor over the individual boxplots to view the values.



(*Fig. 5)*

2 *Click the tab to view all the compounds and more. The following page will open with the significant compounds. The boxplot shows the median values and differences between the two groups.*

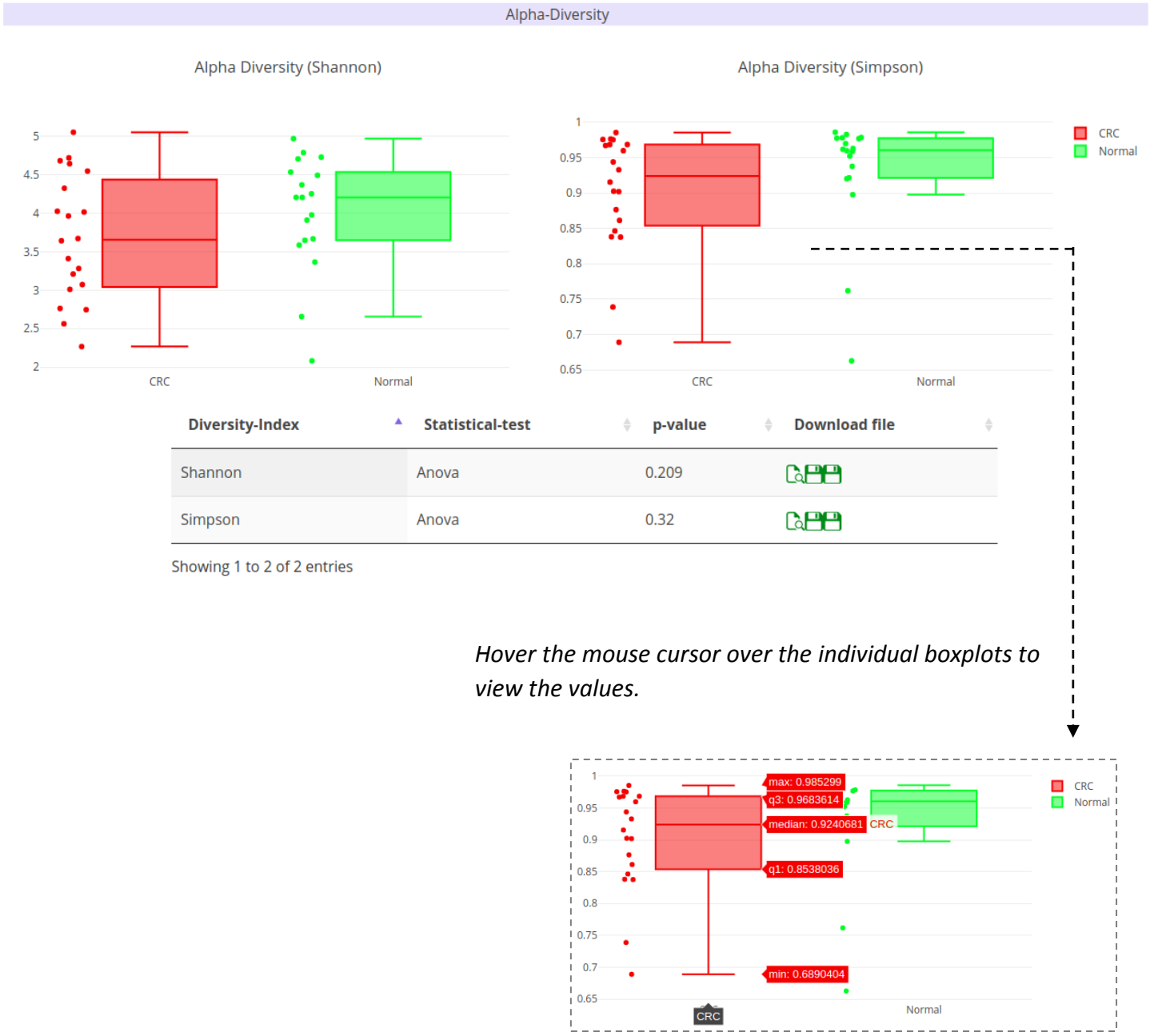


(*Fig. 6*)

3 *Click to download the data table (tsv format).*

4 *Click to open the data table in a new webpage (tsv format).*

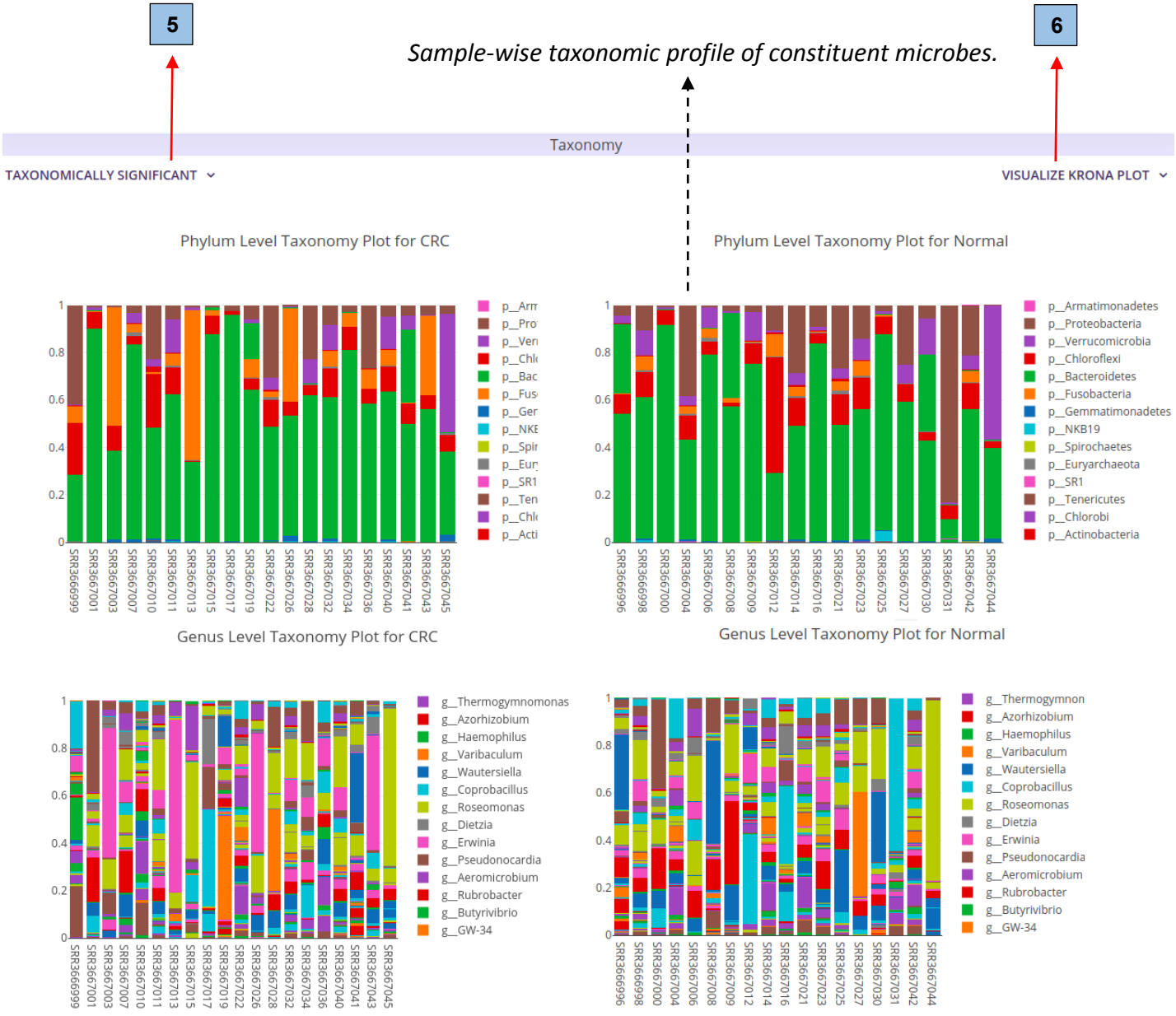
ALPHA DIVERSITY:



Hover the mouse cursor over the individual boxplots to view the values.

(*Fig. 7)*

TAXONOMIC DIVERSITY:

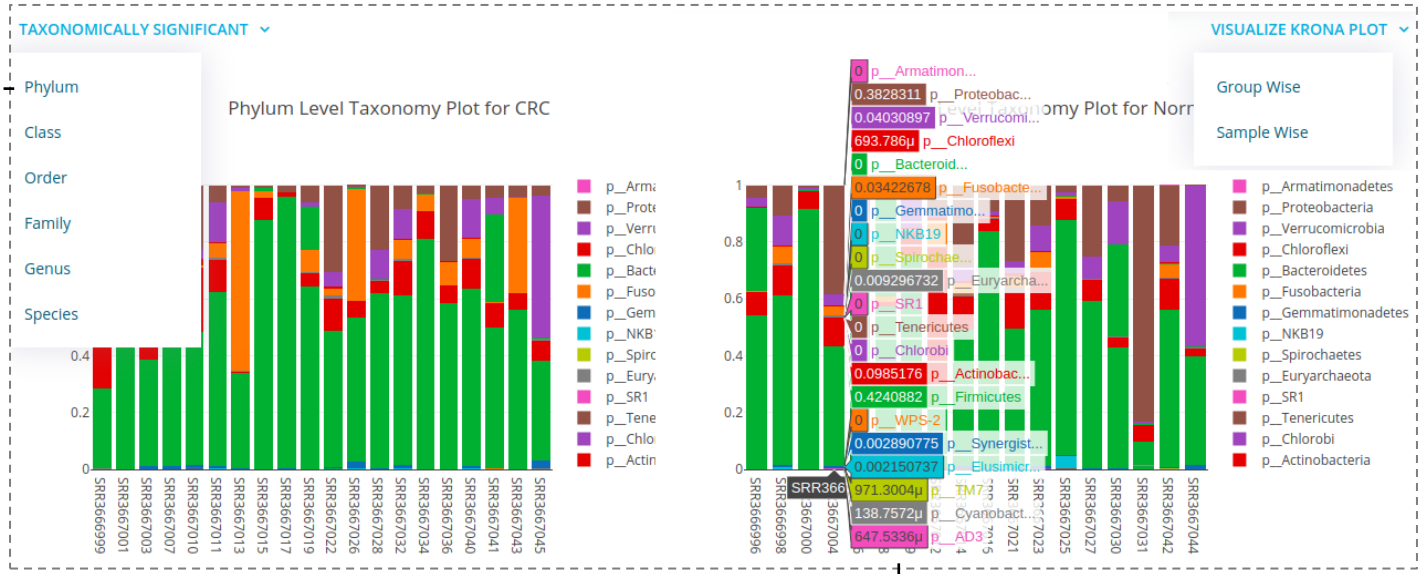


S.No	File Description	Download File
1	Phylum Level Taxonomy Data Group1	
2	Phylum Level Taxonomy Data Group2	
3	Genus Level Taxonomy Data Group1	
4	Genus Level Taxonomy Data Group2	
5	Statistically Significant OTUs Group1	
6	Statistically Significant OTUs Group2	

Showing 1 to 6 of 6 entries

(*Fig. 8)*

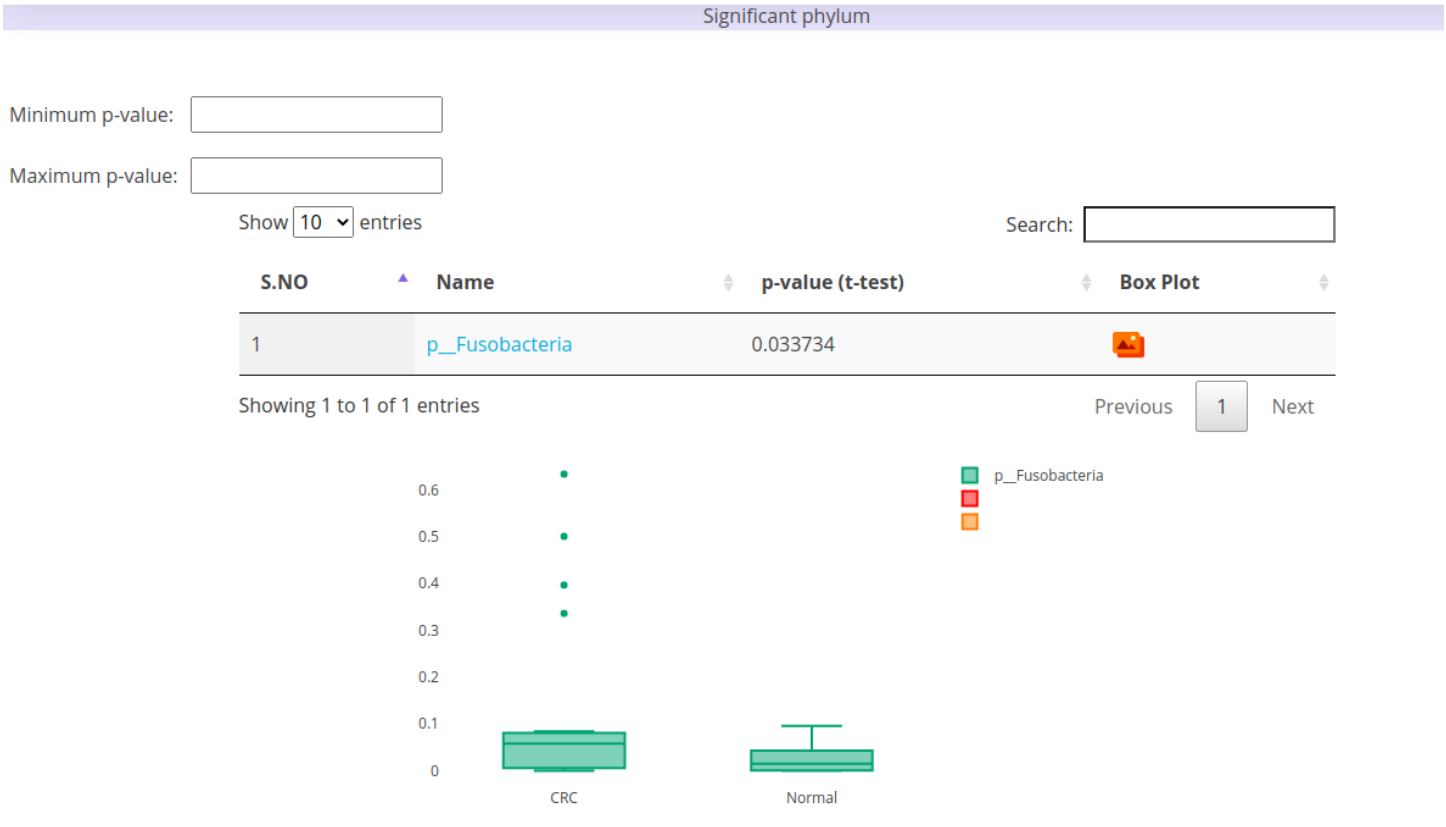
5 *Click on this tab to find a drop-down list (shown below), from which user can select the desired taxonomic level to check significant ones and is visualized in a new webpage, also depicted below.*



(Fig. 9)

Hover the mouse cursor over the individual samples to view the different taxa and their relative abundance.

Click on one of the taxonomic level to go to the following page showing the taxa that are significant.



(*Fig. 10)*

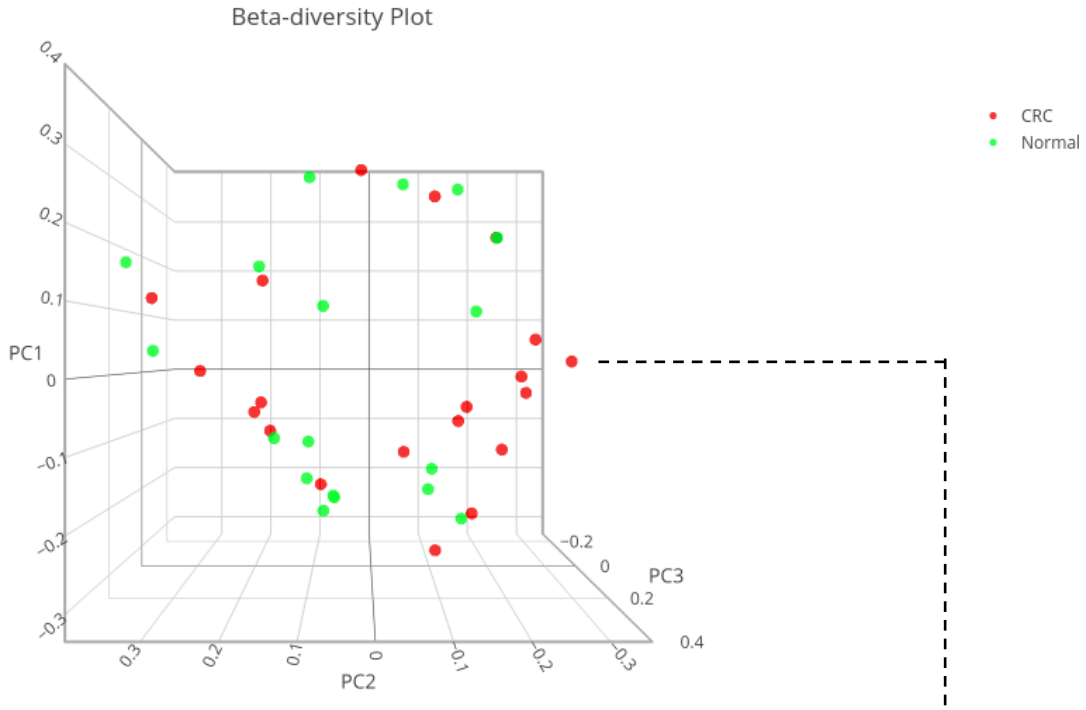
6 *Click on this tab to open the Krona plots representing the taxonomic abundance profile, both group-wise and sample-wise (as shown in fig. 9). This is an interactive plot, and is another way of depicting the taxonomic profiles.*

Click on the different segments to see its constituent taxa and at different levels. The ring can be collapsed back into its higher levels of taxa.

(*Fig. 11)*

BETA DIVERSITY:

Beta-Diversity

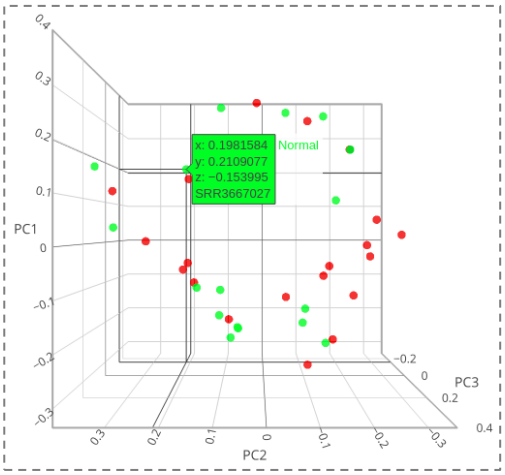


	F-statistics	p-value
Bray-Curtis (Adonis test)	0.764205869250095	0.793

Showing 1 to 1 of 1 entries

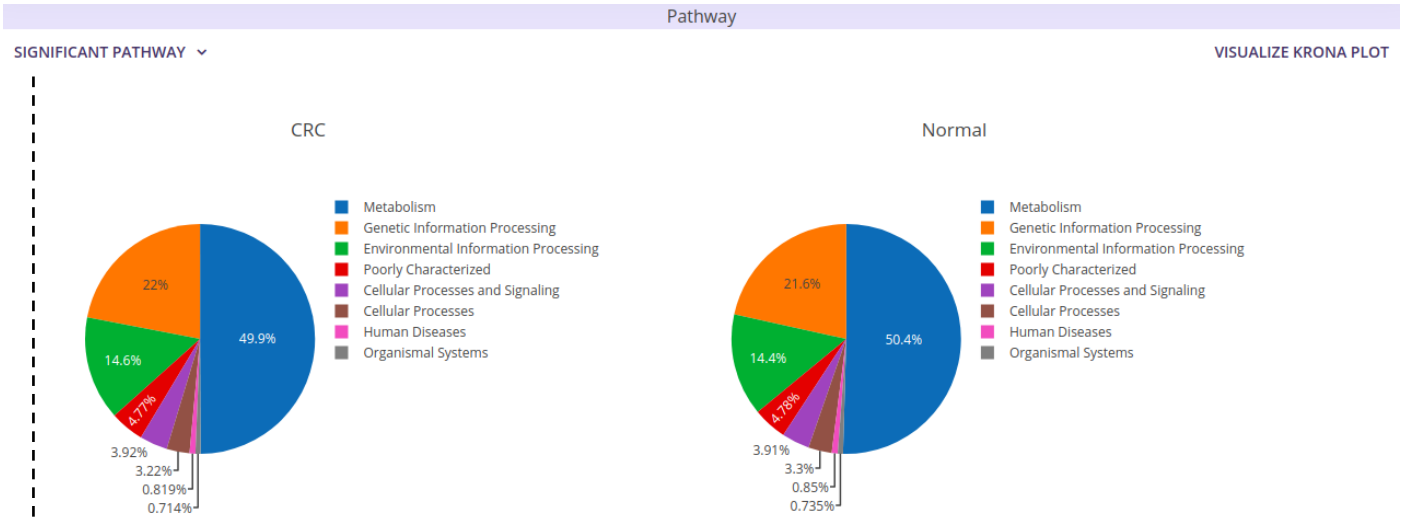
File Name	Download
Beta-Diversity p-value detail(adonis)	
Beta-Diversity Plot Data	

Hover the mouse cursor over the individual dots to view the values and sample number.

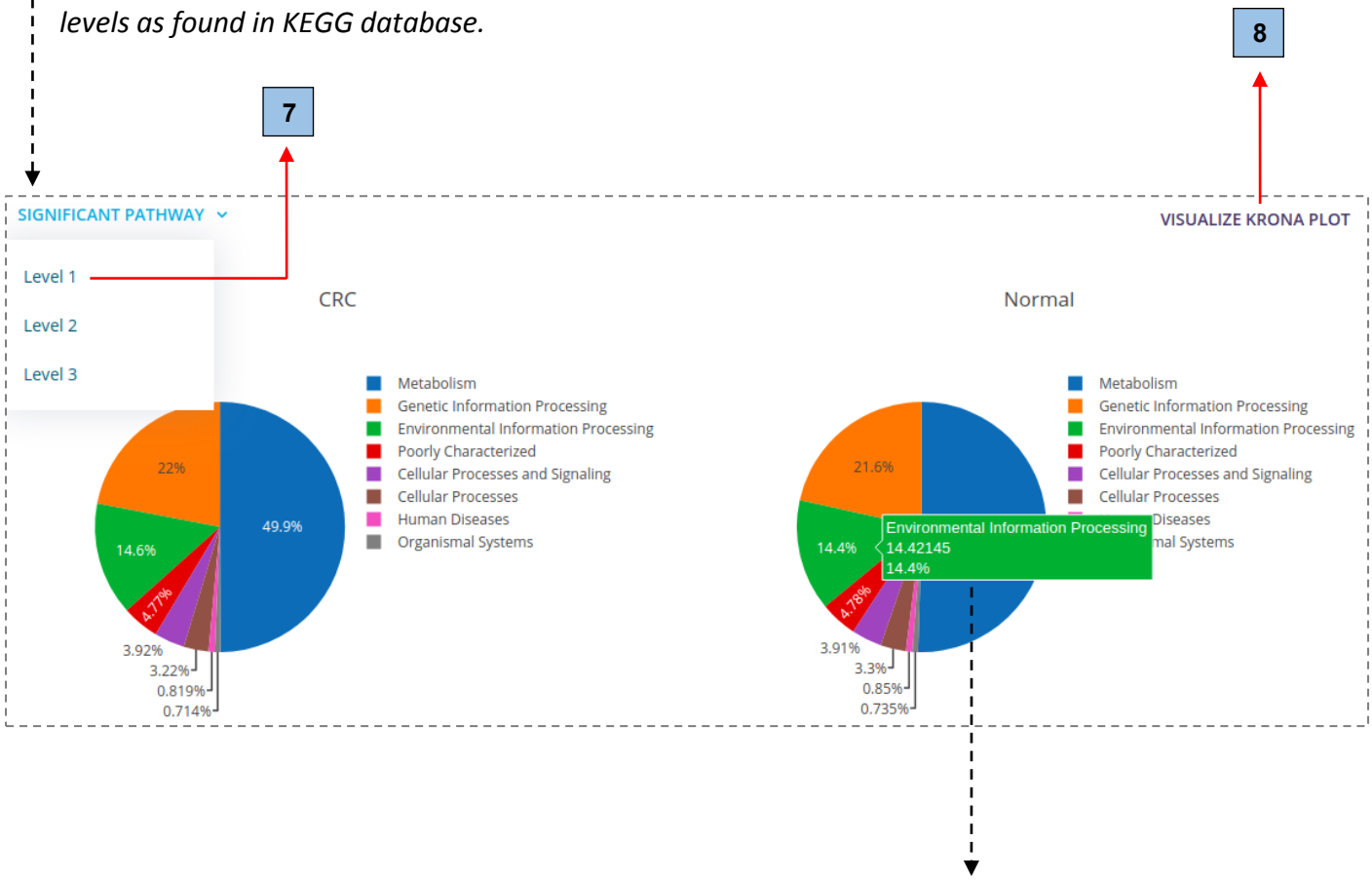


(Fig. 12)

PATHWAY ANALYSIS:



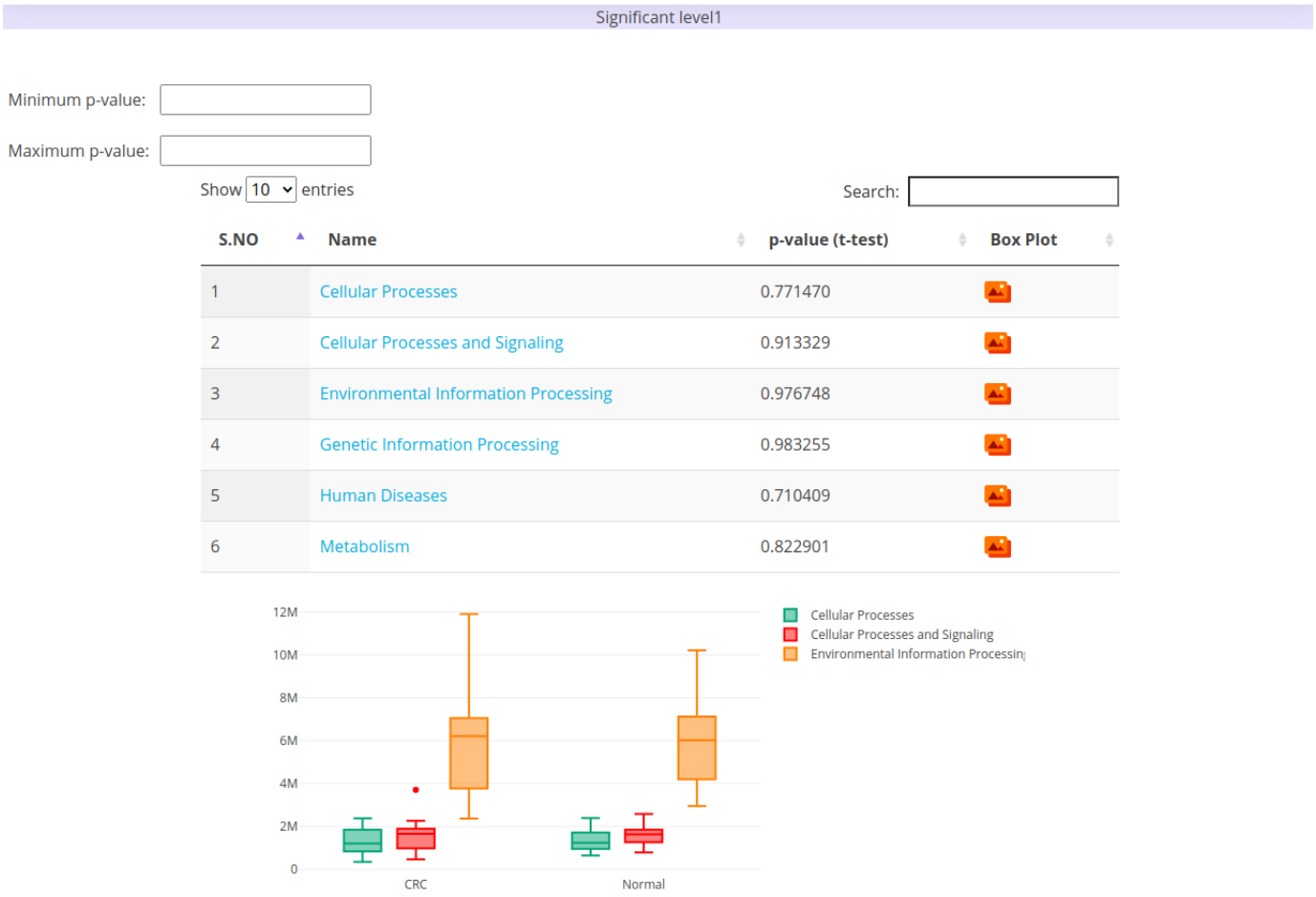
Click on the tab for a drop-down list showing the different pathway levels as found in KEGG database.



Hover the mouse cursor over the different section to view the pathway name and the percentage of its contribution to overall metabolism in that group.

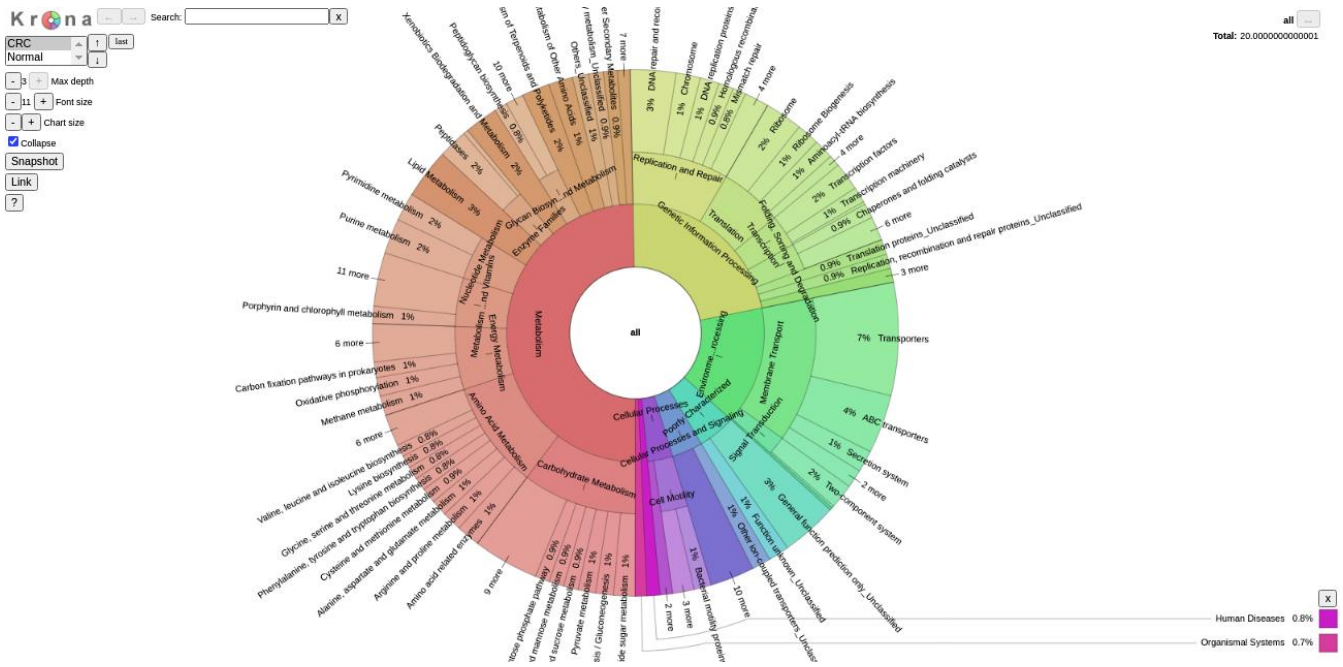
(Fig. 13)

7 *Click on one of the levels to check the significant pathways in that level and it opens in a new page.*



(Fig. 14)

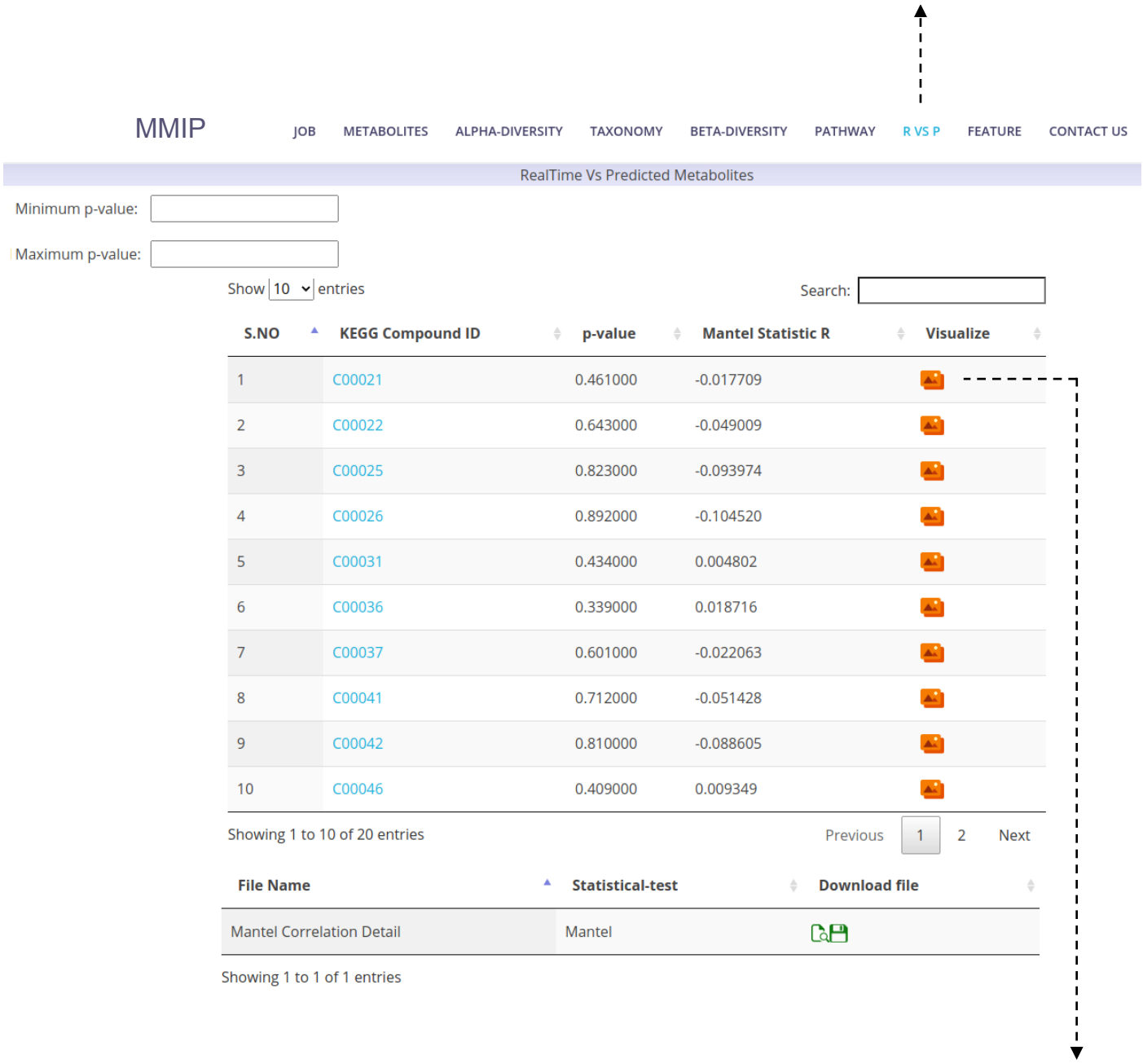
8 *Click on this tab to visualize the Krona plot for metabolic pathway abundances between two groups.*



(Fig. 15)

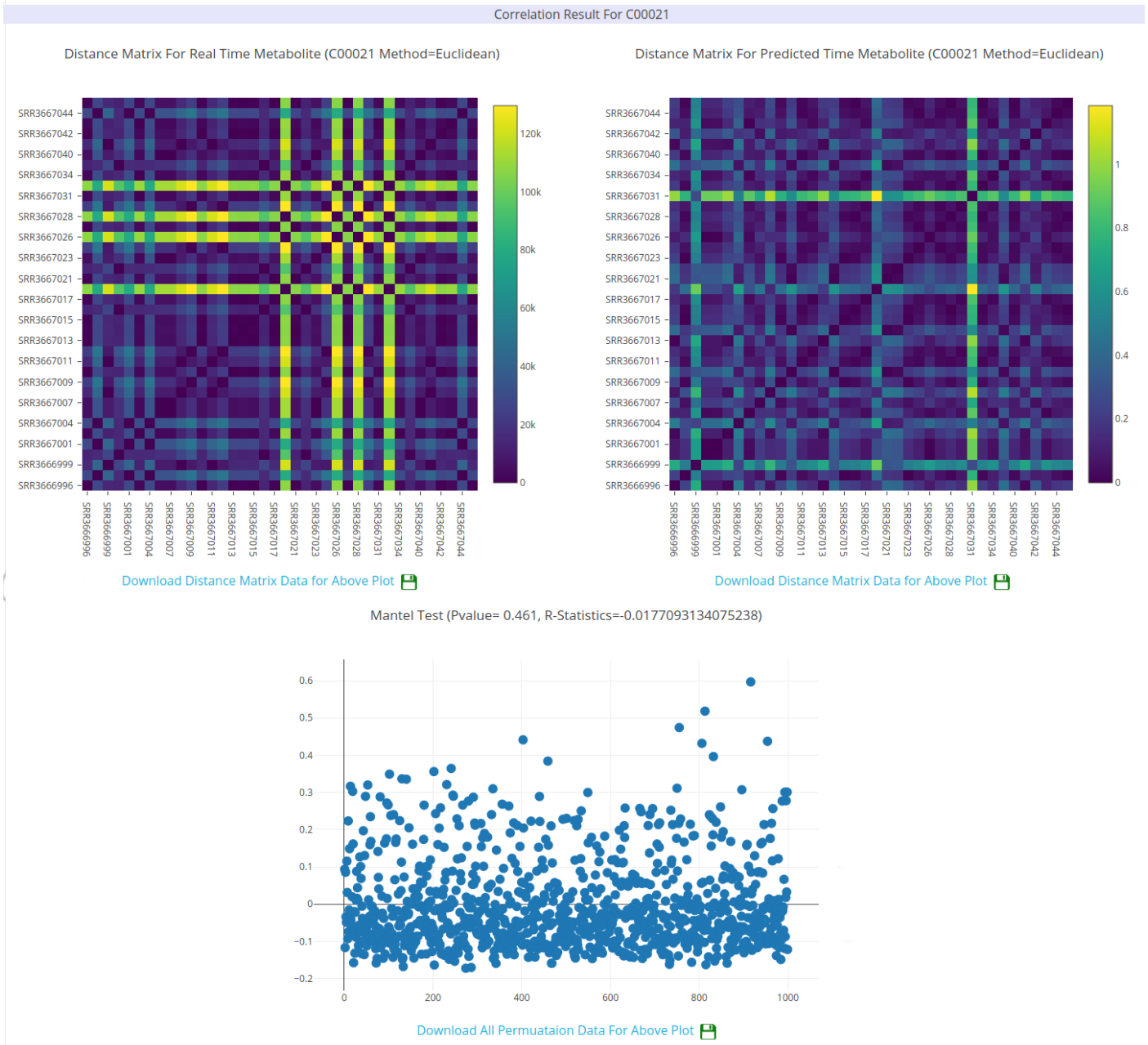
REAL TIME V/S PREDICTED METABOLITES:

In case of MMIP MASS this additional tab is observed.



Click to open the correlation results of this metabolite in a new page (as shown in fig 17).

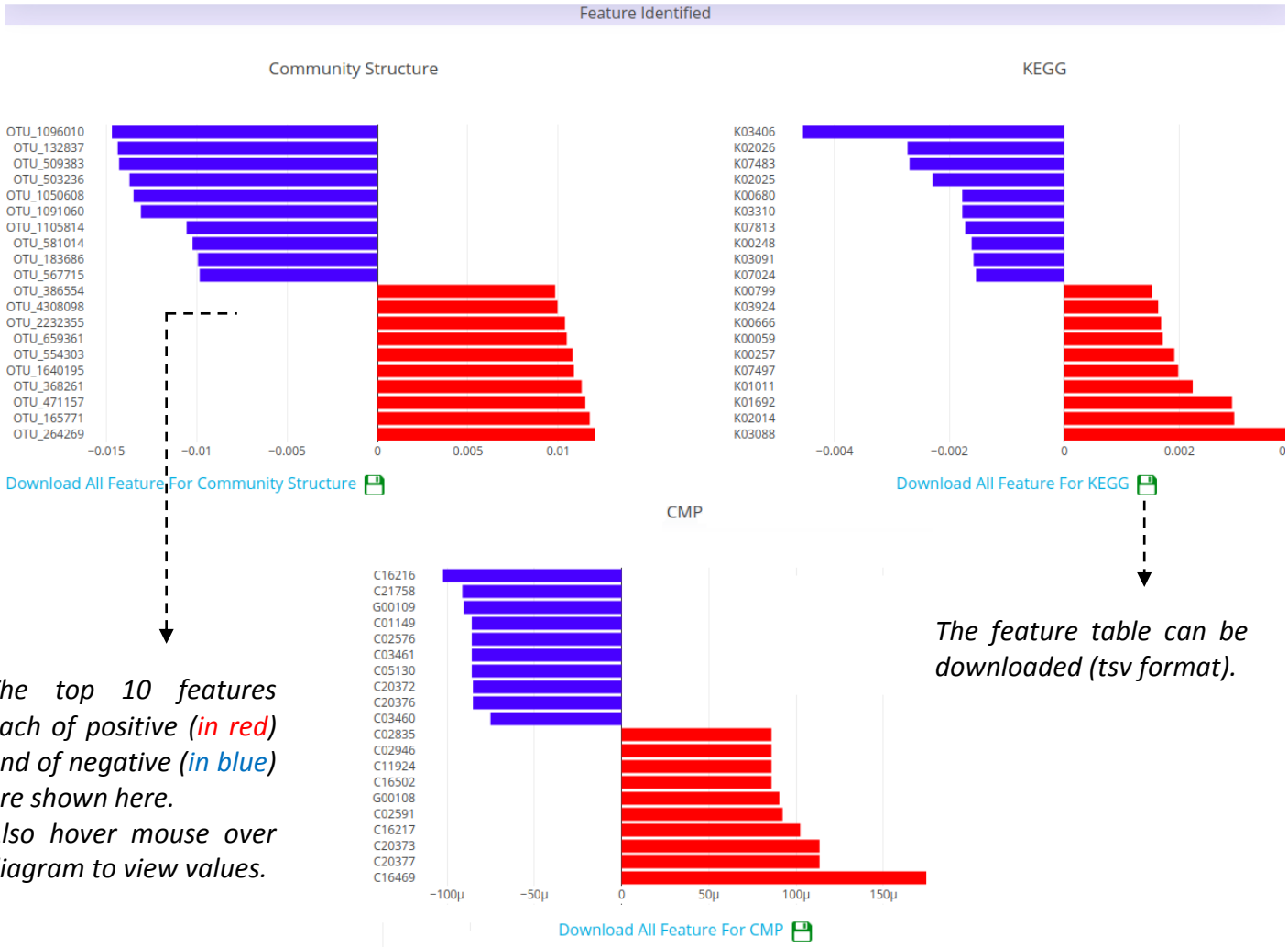
(Fig. 16)


Correlation Result For C00021
Distance Matrix For Real Time Metabolite (C00021 Method=Euclidean)
Distance Matrix For Predicted Time Metabolite (C00021 Method=Euclidean)
Download Distance Matrix Data for Above Plot
Download Distance Matrix Data for Above Plot
Mantel Test (Pvalue= 0.461, R-Statistics=-0.0177093134075238)
Download All Permuataion Data For Above Plot

(Fig. 17)

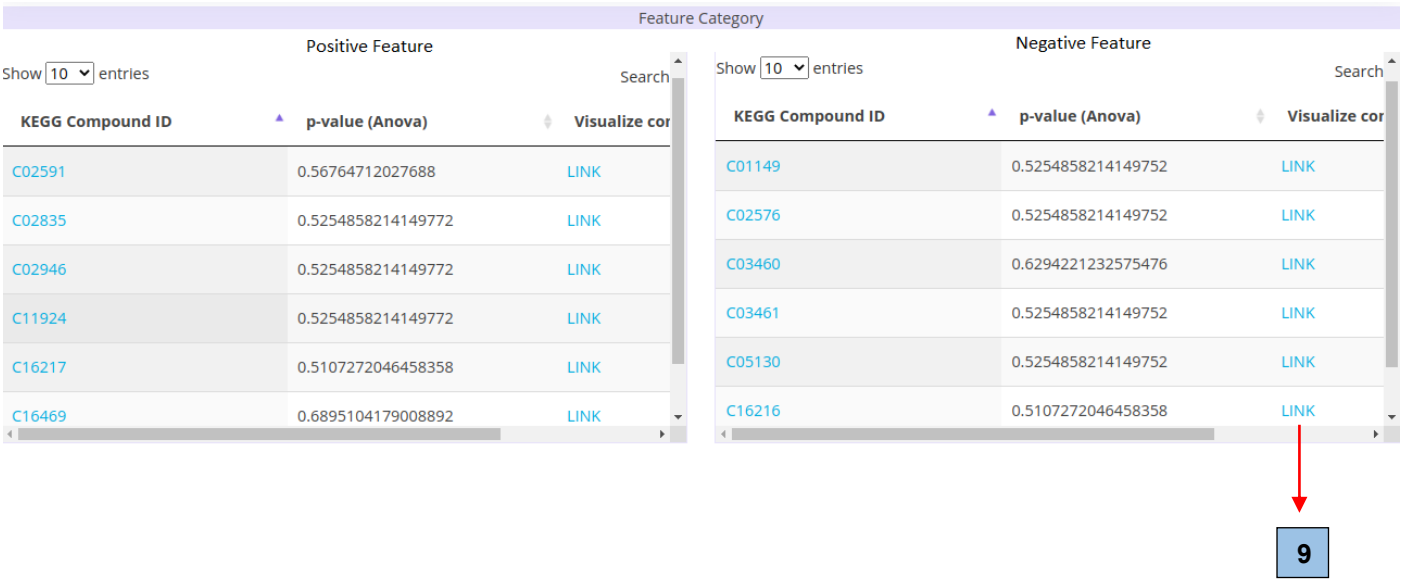
FEATURE PREDICTION:

(Fig. 18)



The top 10 features each of positive (in red) and of negative (in blue) are shown here.
Also hover mouse over diagram to view values.

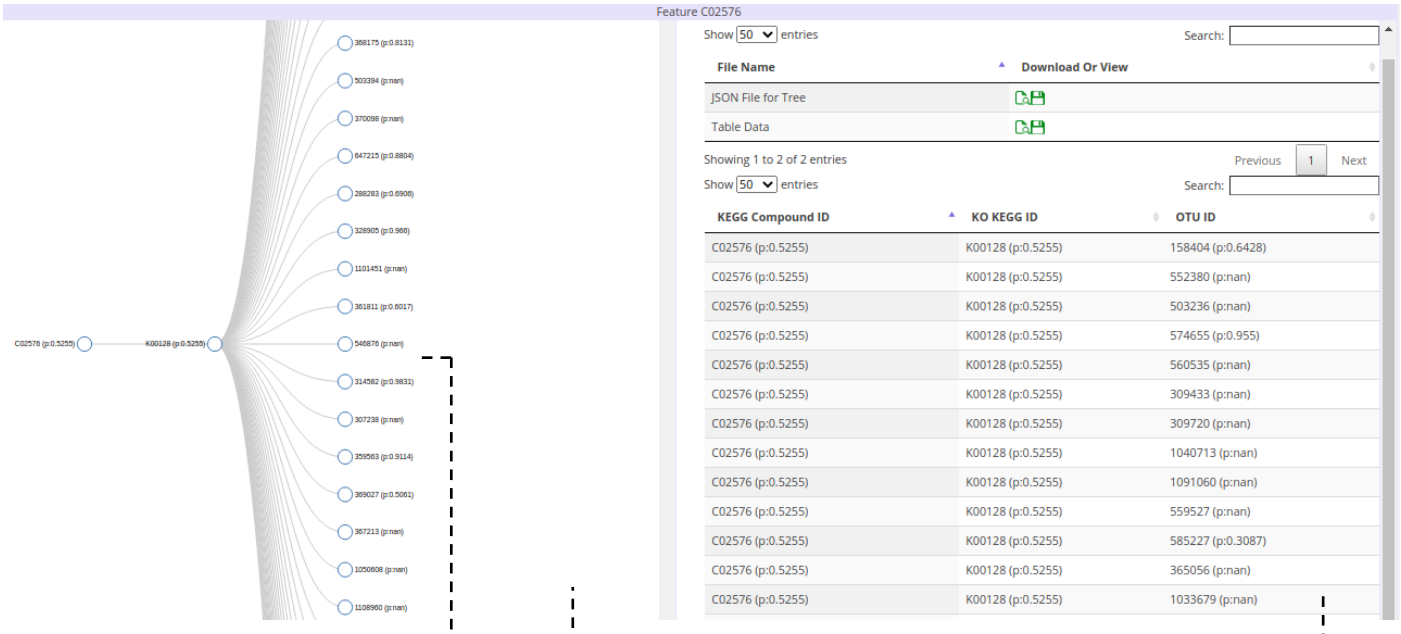
The feature table can be downloaded (tsv format).



9

(Fig. 19)

9 *Click on the link to visualize the following page which shows the predicted microbial source of metabolites (predicted as feature by our algorithm), in a tree as well as tabular form. [all p values provided in adjacent brackets]*

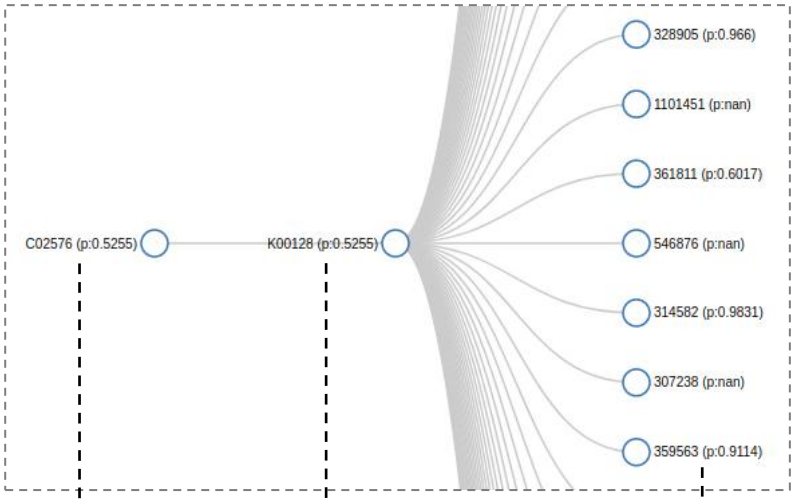


Expanded view of the tree.

Positive Feature
png svg

Save the tree (found on the top of the diagram).

The adjacent feature links represented in a tabular format and can be downloaded.



Predicted Metabolite

The pathway that the predicted metabolite is associated with.

All the OTU ids (microbes) that could probably be the source of the predicted metabolite.

(Fig. 20)