INTERDICTionary™

User Manual

Version 1.0

Contents

Accessing the INTERDICTionary Application

URL: https://interdictionary.excelra.net/
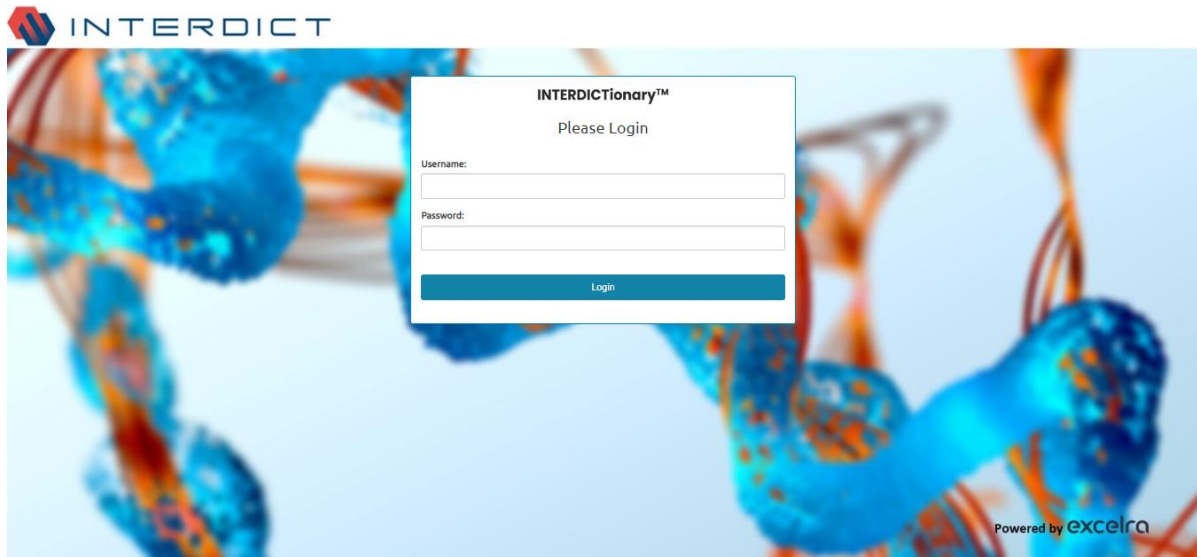
Home page after logged in

The image above shows the view post signing-in to the application. The details on the buttons (tagged with numbers) can be referred below:

1. Query

    a.   Normal

        User can enter the n number of sequences with comma separated.

           i.   E.g. AAAA,AANA, AACA

    b.   Regex

In order to search manually for multiple sequences in a single search, the application also provides an option to perform Regex-based search. Through this, user can obtain results in a single click. The user has to make sure that he is not clubbing multiple different sequences separated by comma.

E.g. **^PP[G,A,V].T$**
        The above query would search the results for all sequences starting with P, having P at 2nd position, having either G or A or V at 3rd position & ending with T.

2. Input box

The box facilitates the user to enter peptide sequence of interest. He has to make sure that they are either 4/5 amino acids long else warning would be flashed as the application houses only 4/5 length sequences results.

3. Filter by sequence

Once, entering sequences in the input box, user has to click Filter by sequence(s) button to direct the application to show results.

4. Find overlap

User can click on this action button to find the overlapping results (based on Entry) in case he wants to query multiple sequences. This will generate 2 more tables in same page if the overlap exist. "Overlapped Entries for Sequences" show Entries where multiple sequences exist. "Detailed data for Overlapped Entries" will show all the data for multiple overlapping Entries.

5. UniProt

User can click on this UniProt logo, it redirects to UniProt website
https://www.uniprot.org/id-mapping

Tab description

In this application there are 4-tab panels

6. Results Summary

Shows the filtered data which is generated using query. The rows are clickable & allows the user to see detailed results in the *Selected Data* Tab.

Query to filter data   Filtered data

7. Selected Data

- Shows the selected rows which are selected from **Results Summary**, for this user must click on the **Extract Data**
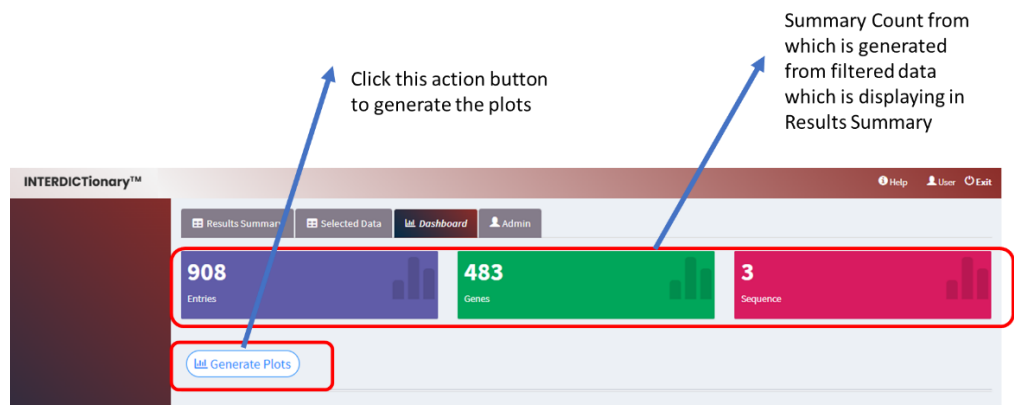

Selected two rows

- Go to **Selected Data** tab-panel and click on **Extract Data** button then user can see the data like below

8. Dashboard

- Dashboard shows list of top 100 maximum occurring sequences
- It also shows list of top 100 least occurring sequences.
- Dashboard will generate the plots and summary counts based on filtered data
  - i. Summary counts will be displayed automatically
  - ii. To generate the plots user must click on the Generate Plots button
- Dashboard will be changed dynamically after changed the query in Results Summary

Click this action button to generate the plots

Summary Count from which is generated from filtered data which is displaying in Results Summary

Sequence vs Entry (In how many Entries the queried sequence is present)
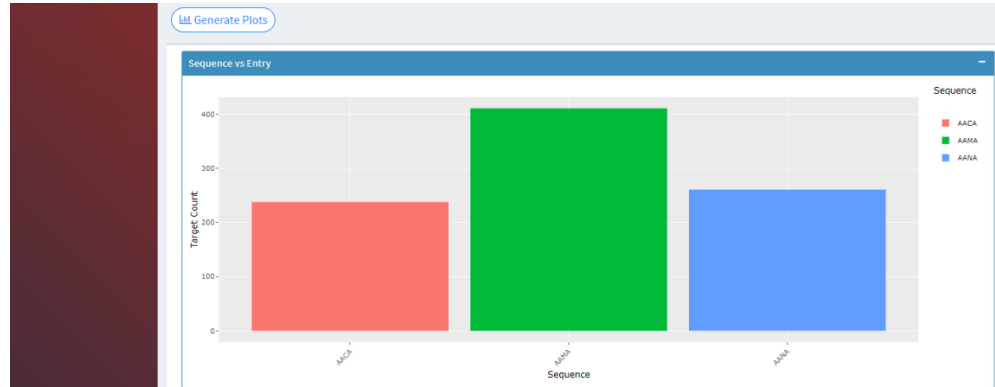
Sequence vs Count (frequency of sequence occurring)
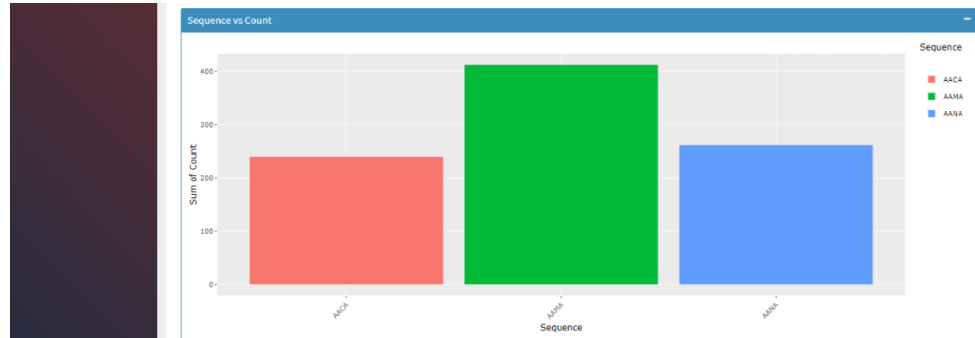
Sequence vs Gene Count (How many Genes, queried sequence is present)

9. Admin

- Admin tab-panel will be accessible only by admin
- Admin panel will contain multiple options to manipulate the data which is presented in *Selected Data* tab-panel
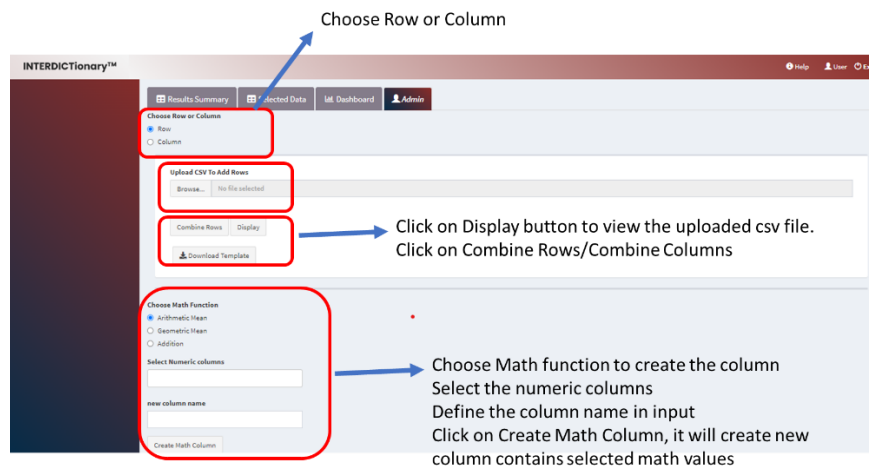

Choose Row or Column

Click on Display button to view the uploaded csv file.
Click on Combine Rows/Combine Columns

Choose Math function to create the column
Select the numeric columns
Define the column name in input
Click on Create Math Column, it will create new column contains selected math values

i. Add Row
   1. Download the template and add data to be appended to the template and upload it by clicking on the Combine Rows button
   2. Results will be displayed in the *Selected Data* tab-panel
ii. Add Column
   1. Download the template and add newer data to the template and upload it by clicking on the Combine Column button
   2. Results will be displayed in the *Selected Data* tab-panel
iii. Add Match Column
   1. Choose Math Function
      a. Arithmetic Mean
         i. Will calculate Arithmetic Mean of two or more columns and creates the new column
      b. Geometric Mean
         i. Will calculate Geometric Mean of two or more columns and creates the new column
      c. Addition
         i. Will calculate summation of two or more columns and creates the new column
   2. New column name should be mentioned in the input box by the user.
   3. Manipulated data will be displayed in the *Selected Data* tab-panel