Readme

seed

7   2

n n n n n n n n n n n n N N N N N N n-p 5' **microRNA**

| | | | | |

. . . . N N N N N **6mer**

. . . . N N N N N N . . . . **7mer**   **mRNA**

. . . . N N N N N N N **8mer**

suppl.   seed

16   13   7   2

n n n n n N N N N n n n n n N N N N N N n-p 5' **microRNA**

| | | | | | | | | |

. . N N N N ———— N N N N N . . . **6mer+Suppl.**

. . N N N N —— N N N N N N . . . **7mer+Suppl.**   **mRNA**

——— variable length bridge (1-15)

Firsts steps:

- Download the 2 executable files available on github
- Download the 4 files for human analysis on this link
- Executables and files must be downloaded in the same folder

The folder will look like this, 2 '.exe' files and 4 '.txt' files:

|				
searchByMicroRNA	↻	7/2/2022 14:11	Aplicación	30.392 KB
searchByMessengerRNA	↻	7/2/2022 14:21	Aplicación	30.392 KB
miR_Family_Info_targetScan_2016	⊘	9/7/2021 19:16	Normal text file	774 KB
mart_export_CDS_2021_oneline	↻	13/7/2021 14:15	Normal text file	145.433 KB
mart_export_5UTRs_2021_oneline	↻	13/7/2021 14:15	Normal text file	35.254 KB
mart_export_3UTRs_2021_oneline	↻	13/7/2021 14:15	Normal text file	116.218 KB

Microsoft Defender will not recognize the programs when you open them. You should click on **'More info'** and click on **'Run anyway'**
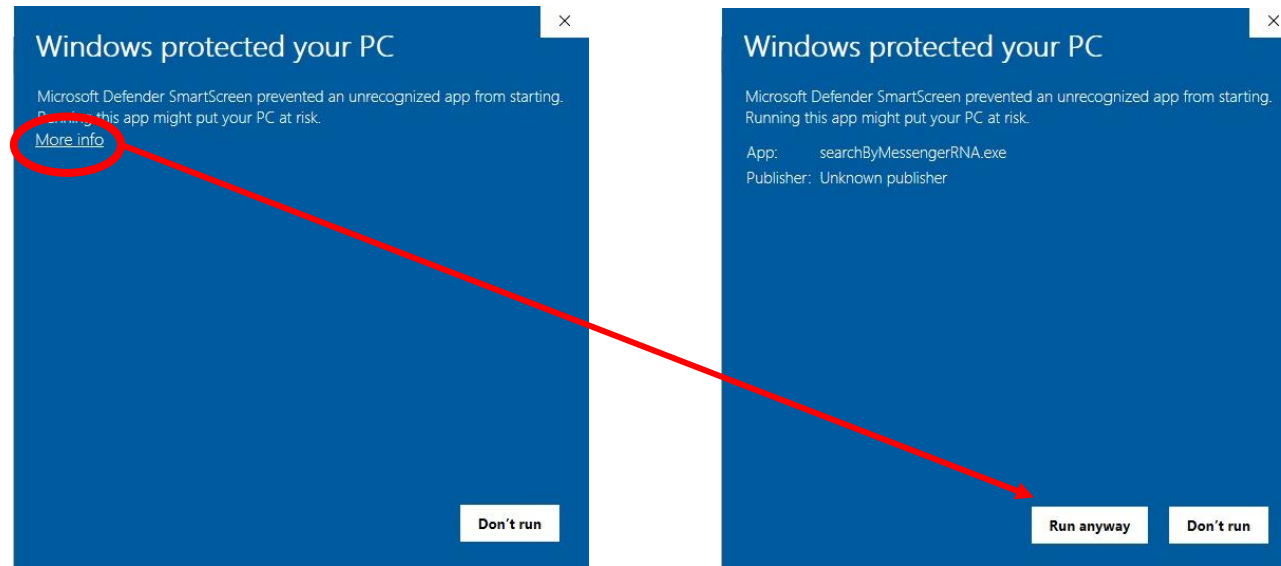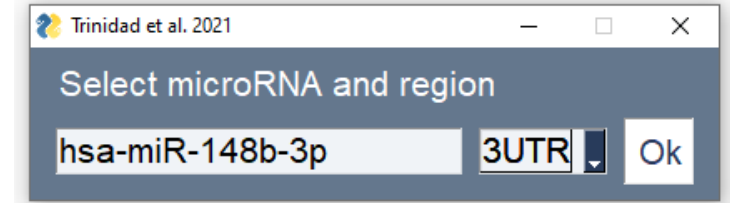
Search by microRNA

If you are interested in looking for **all target mRNAs** that have sequence complementarity with seeds and seed plus supplementary-region **of certain microRNAs**, you should open the **searchByMicroRNA** executable script:
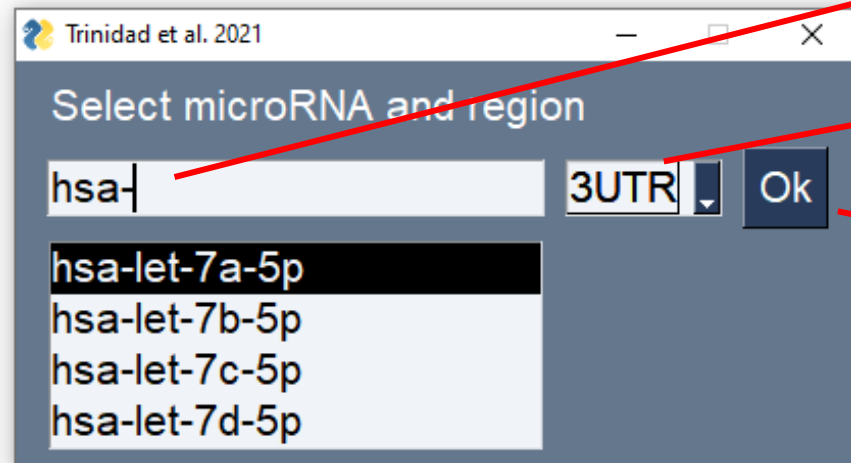
1. Write or select microRNA name of interest
2. Select mRNA region in to look for
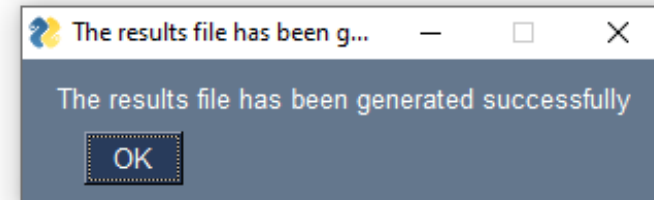3. Press "OK" bottom to run the process

4 While process is running the "OK" bottom will be unavailable (white fill). This will take from few seconds to few minutes depending on the computer power.

Trinidad et al. 2021

Select microRNA and region

hsa-miR-148b-3p | 3UTR | Ok

5 When the file is ready this window will pop up.

The results file has been g...

The results file has been generated successfully

OK

6 Check for the **.csv** (comma separated) output in the folder where you run the **.exe**
The name must start with the microRNA name and finish with the region you search for.

| searchByMicroRNA | ⊘ | 7/2/2022 14:11 | Aplicación | 30.392 KB |
searchByMessengerRNA	⊘	7/2/2022 14:21	Aplicación	30.392 KB
miR_Family_Info_targetScan_2016	⊘	9/7/2021 19:16	Normal text file	774 KB
mart_export_CDS_2021_oneline	⊘	13/7/2021 14:15	Normal text file	145.433 KB
mart_export_5UTRs_2021_oneline	⊘	13/7/2021 14:15	Normal text file	35.254 KB
mart_export_3UTRs_2021_oneline	⊘	13/7/2021 14:15	Normal text file	116.218 KB
hsa-miR-148b-3p_finditer_microRNA_6mer_and_...	⊘	7/2/2022 15:22	Archivo de valores...	3.304 KB

Output file

Remember this is a **comma separated file**, so, you must use Excel Data > Text to Columns or alternatively if you want the table to be formatted you can open excel, select Data and From Text/CSV and then select the file and load it. Here is and example:

https://support.microsoft.com/en-us/office/split-text-into-different-columns-with-the-convert-text-to-columns-wizard-30b14928-5550-41f5-97ca-7a3e9c363ed7

Search by mRNA

If you are interested in looking for with seeds and seed plus supplementary-region interactions of **any** **microRNA** in **certain mRNAs**, you should open the **searchByMessengerRNA** executable script :
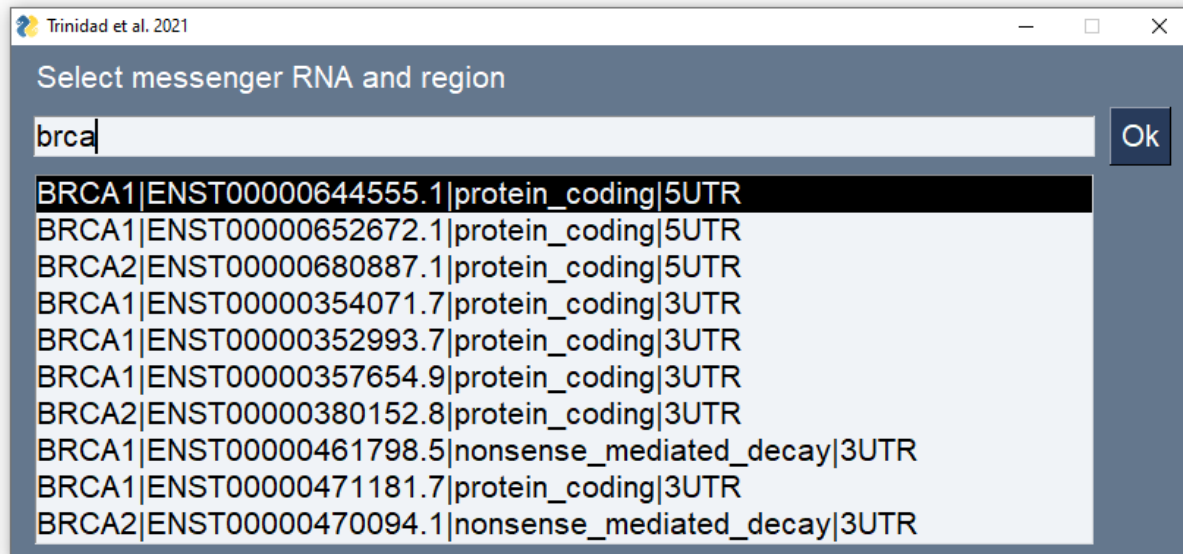
1 Write and select mRNA of interest. Consider that selection include:

Gene Name **|** Transcript stable ID version **|** Gene type **|** mRNA region to search for
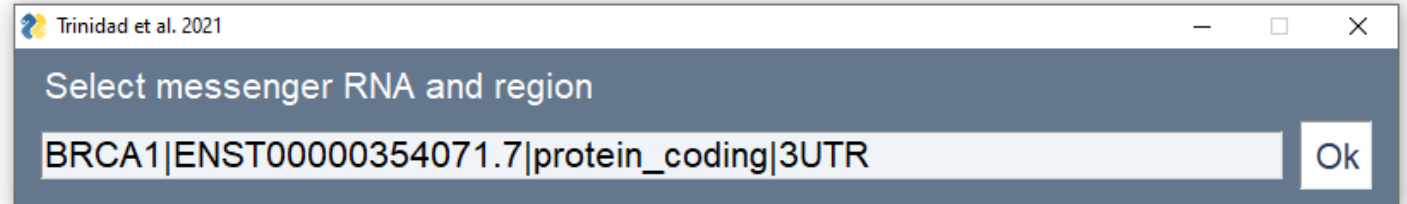
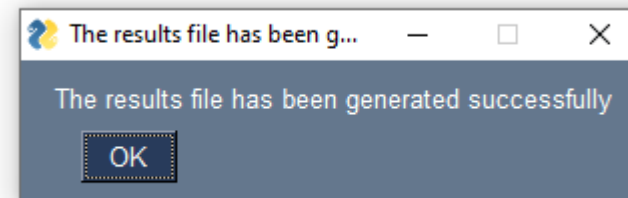Gene Name | Transcript stable ID version | Gene type | mRNA region to search for
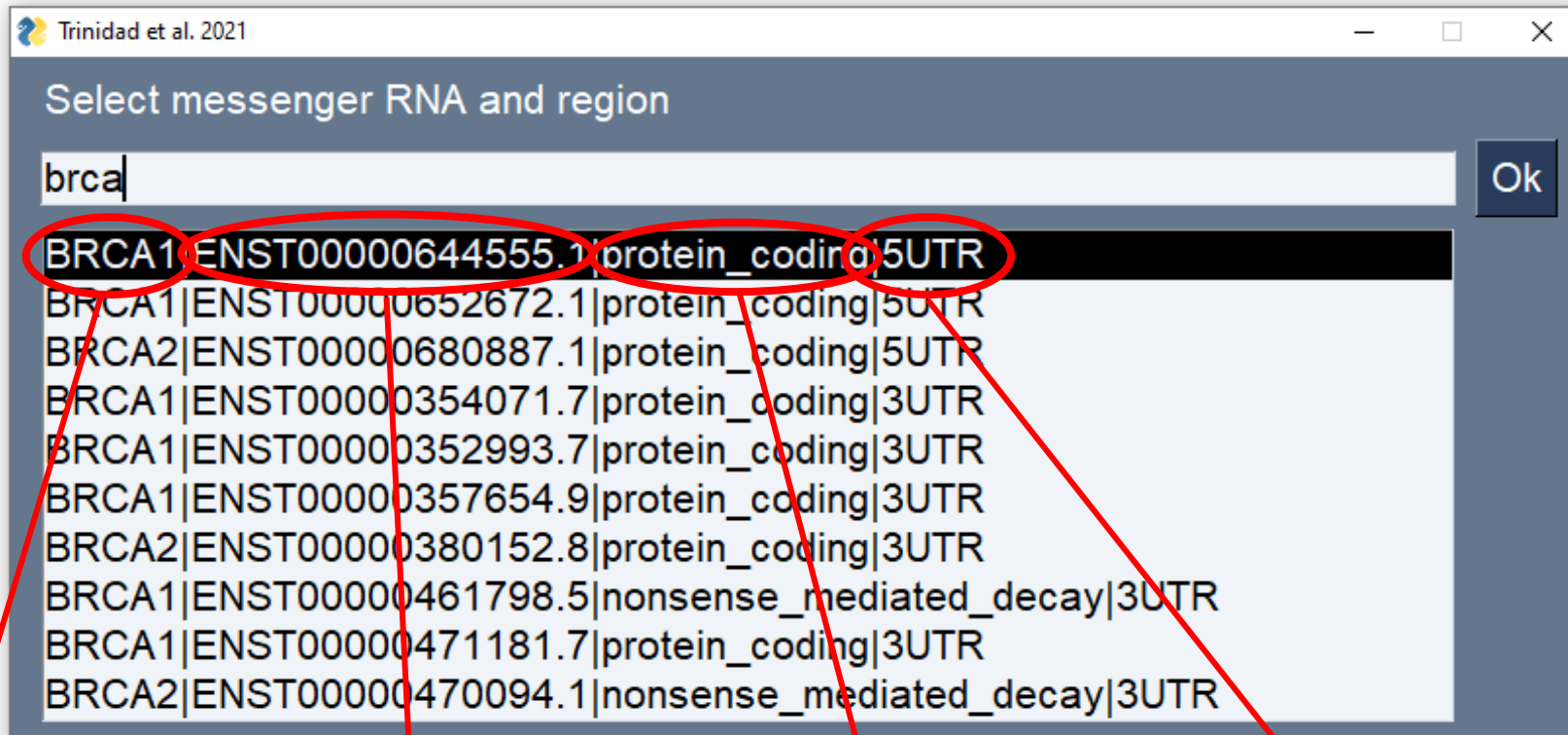
2 While process is running the "OK" bottom will be unavailable (white fill).
This will take from few seconds to few minutes depending on the computer speed.

3 When the file is ready this window will pop up.

4 Check for the **.csv** (comma separated) output in the folder where you run the **.exe**
The name must start with the mRNA name and include all information selected in the first window.

Output file

Remember this is a **comma separated file**, so, you must use Excel Data > Text to Columns or alternatively if you want the table to be formatted you can open excel, select Data and From Text/CSV and then select the file and load it. Here is and example:

https://support.microsoft.com/en-us/office/split-text-into-different-columns-with-the-convert-text-to-columns-wizard-30b14928-5550-41f5-97ca-7a3e9c363ed7
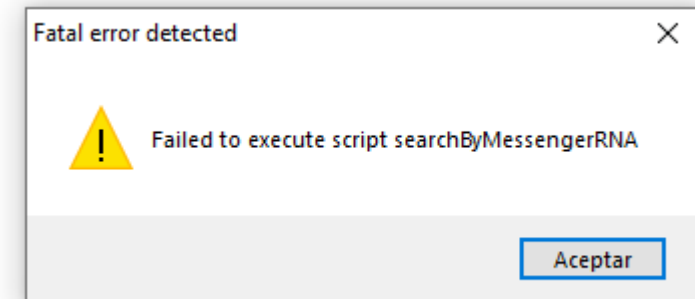
Troubleshooting

Contact jtrinidad@fcien.edu.uy

Most common problem:
Not running program. Check if **texts files (.txt)** are in the same folder than **.exe files.**
To run the programs, you need these .txt files in the same folder.

Fatal error detected ✕

⚠ Failed to execute script searchByMessengerRNA

Aceptar

Interested in running the program for any other specie?

Do not hesitate to contact us, we will be happy to help!

Contact: jtrinidad@fcien.edu.uy