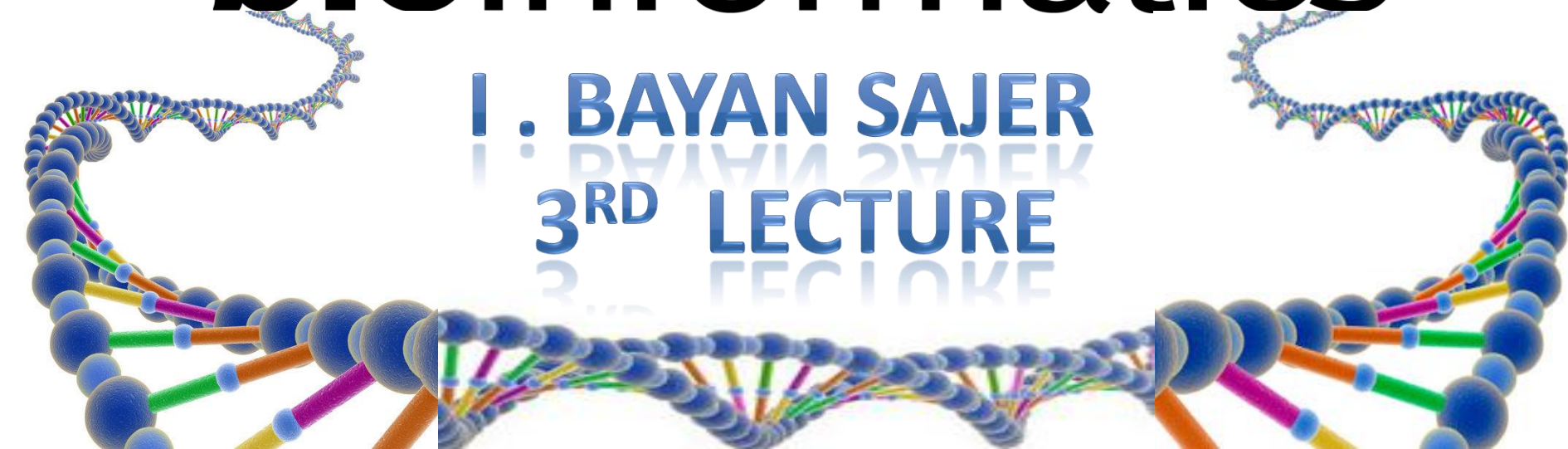# bioinformatics

I . BAYAN SAJER
3RD LECTURE

As you learned previously in the lectures :
There are three *parameters to consider for a dotplot:*
1) **The scoring scheme.**
2) **The cut-off score**
3) **The word size**

The Cut-off score.

The higher the cut-off score the less dots will be plotted. But, each dot is more likely to be significant.

The lower the cut-off score the more dots will be plotted. But, dots are more likely to indicate a chance match (noise).

The Word size.
Is the size or the length of sequences being tested
For sequences with regions of small matching features.
Small words pick small features Individually

Larger words show matching regions more clearly.
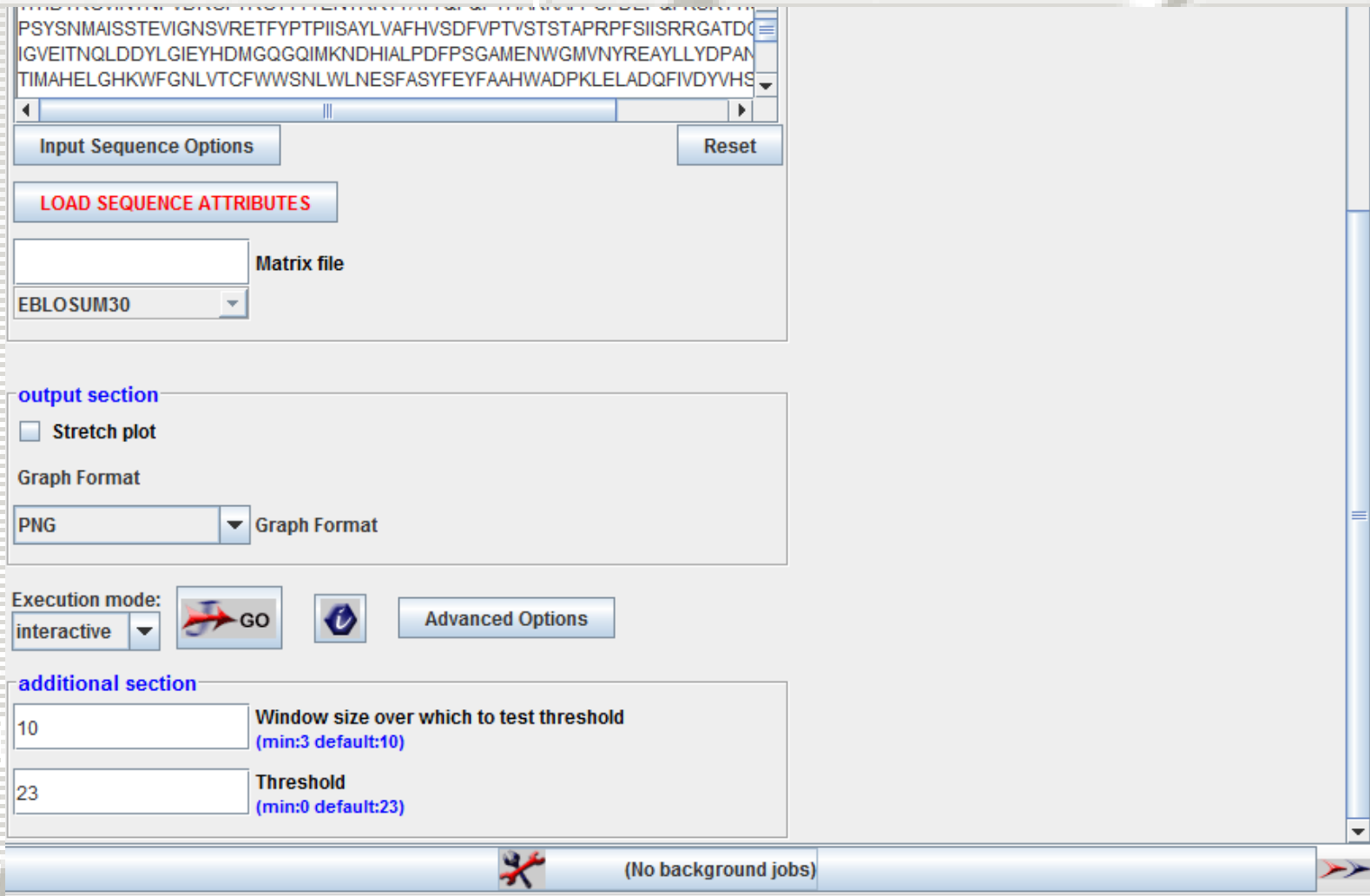*The lack of detail can be an advantage*

Changing the cut off score and word size will give different graphs in the mEMBOS the word size is called (window size) While the cut off score is called threshold .

PSYSNMAISSTEVIGNSVRETFYPTPIISAYLVAFHVSDFVPTVSTSTAPRPFSIISRRGATDC
IGVEITNQLDDYLGIEYHDMGQGQIMKNDHIALPDFPSGAMENWGMVNYREAYLLYDPAN
TIMAHELGHKWFGNLVTCFWWSNLWLNESFASYFEYFAAHWADPKLELADQFIVDYVHS

| Input Sequence Options | Reset |

LOAD SEQUENCE ATTRIBUTES

| | **Matrix file** |

EBLOSUM30

output section

☐ **Stretch plot**

Graph Format
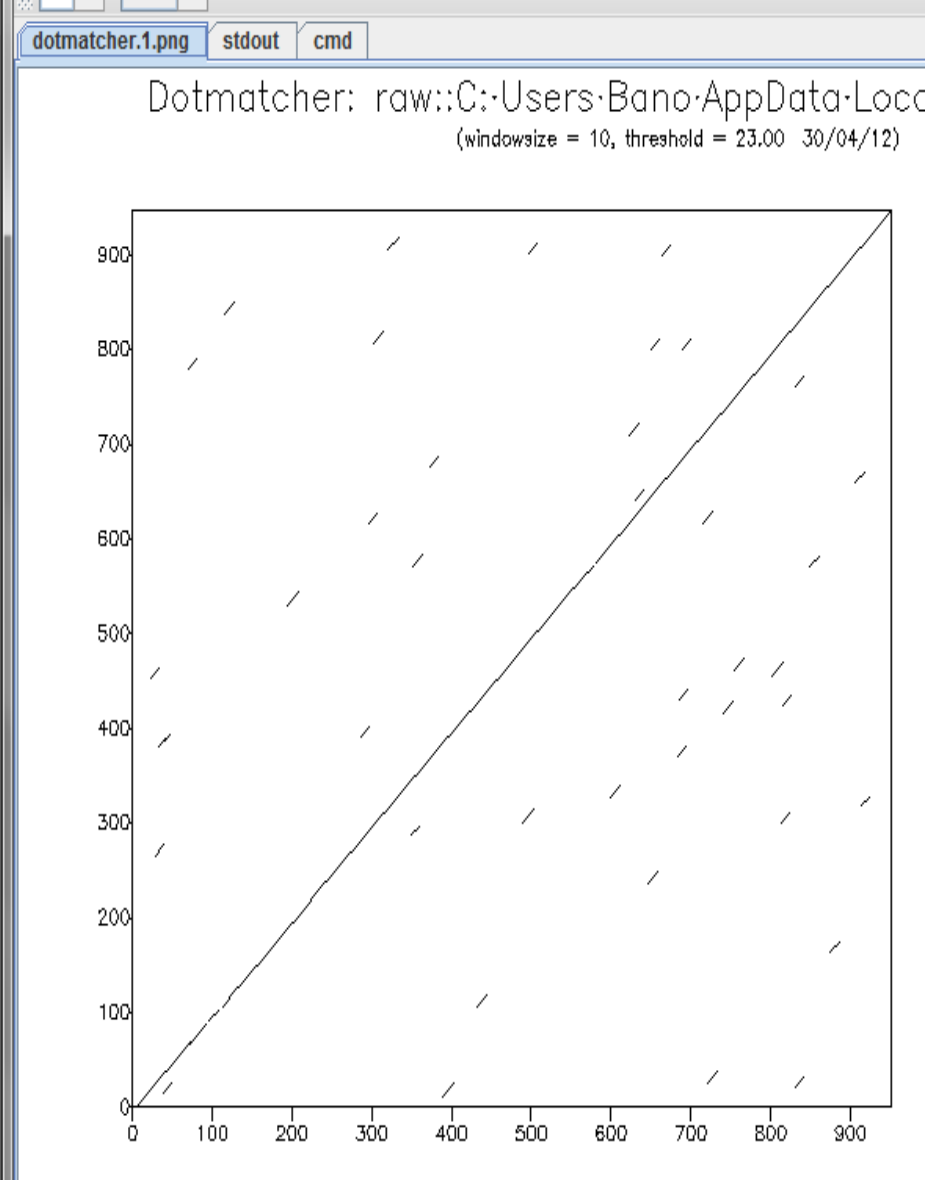
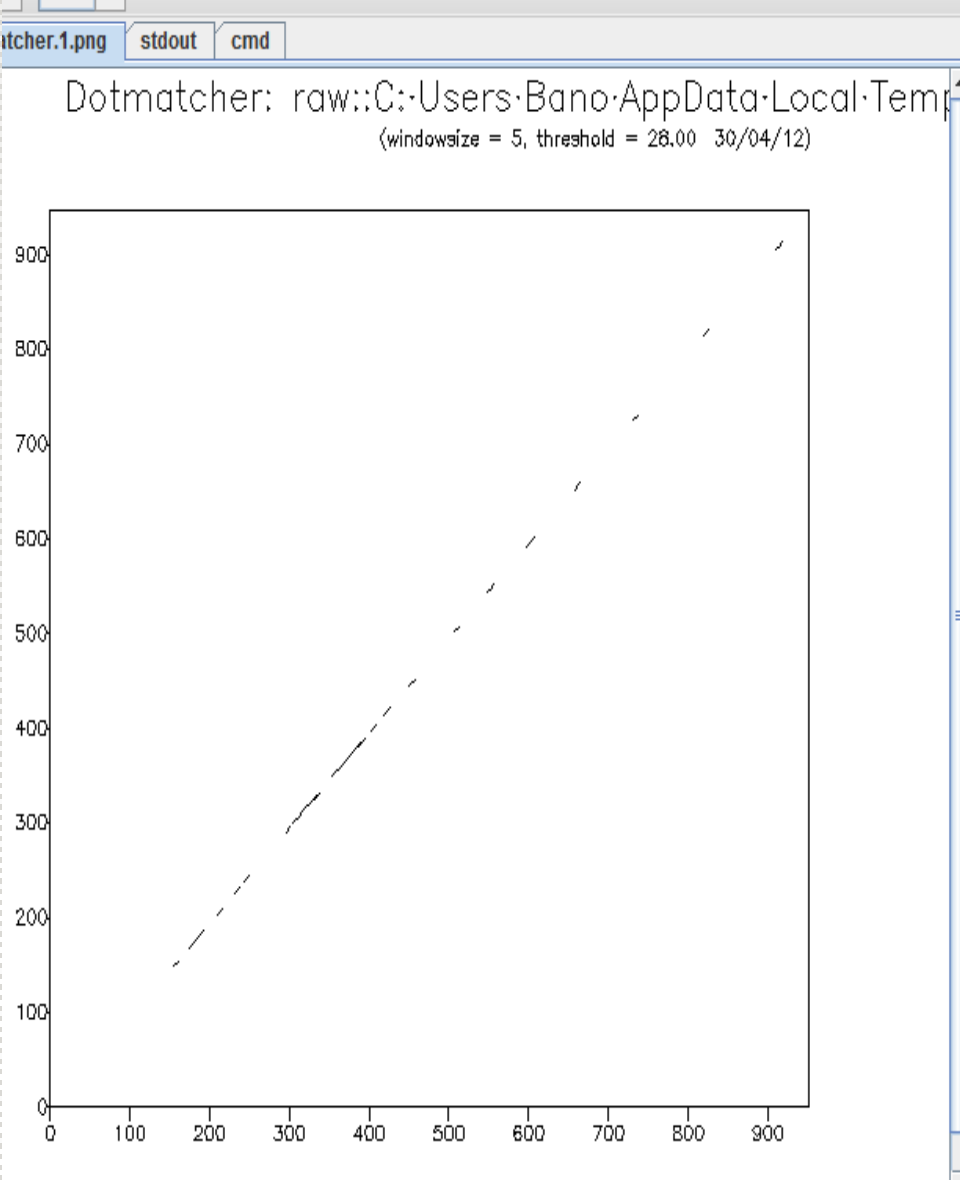PNG ▼ **Graph Format**

Execution mode:
interactive ▼ ➤GO ◆ Advanced Options

additional section

| 10 | **Window size over which to test threshold**
(min:3 default:10) |
| 23 | **Threshold**
(min:0 default:23) |

✗ (No background jobs) ➤

If you want to change the window size and the threshold you should click on advanced option button then screw down

Two graphs for the same alignment but with two different window size and threshold
You can see them in the top of the pages