

BestPal-W

Program for searching best "linear" rna secondary structure for long sequences with a window moving along the sequence.

Method description.

A window with user-defined size moves along the sequence.

For each position of the window the best palindrome is calculated by dynamic programming method without "branching" of structures.

Only the best variant goes to output file.

Output example:

FoldRNA Vienna format:

Length: 590 Energy: -70.1

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      10      20      30      40      50      60
UAUUAUCGUGUGCAGUUAUUUUUUGACUUUUUAAUGCGGCUCCAUUUUUUGGGUCGGUGUUU
.....
      70      80      90     100     110     120
ACUAUUUGAUCAAGGGCUUAAAUUUUUUGUCUUAUACGAAAAACGCACAGAUUUGGU
.....
     130     140     150     160     170     180
AAAGGCUUAACUUAUUUUUUCAGCGCCCAAUACCCCCUUCAGAGUUGCCACACGUUGUU
.....
     190     200     210     220     230     240
ACACUAAGUUAUCGAAACGAACAGCUGAUUUUUUGUUUUUGUAAUAAUUGAGGUUGGUUUU
.....
     250     260     270     280     290     300
GUUGGCUGAAAUAAUUAUUACAUAUUUUUAGAUUUGGACCUUUUACUUCAAAGCGUUUGAC
.....
     310     320     330     340     350     360
AAGUUGAACAUCAAACGGAAAUUAUUUAUAGCCCCAAUUGGCGAGACCAUCAAUAAUUA
.....
     370     380     390     400     410     420
UUGGAAACAACCUAGAGAUUUUCCAGACAAGGCGGAGCGCAAAAAGUGCUGGAACA
(((.....))).....(((.....(((.....(((.....(((.....(((.....(((
     430     440     450     460     470     480
ACCGGGACGAGUAUUGGAAAUGUCUCGAGGAGCACGCCCCAAAGCACAGUUCUACCAGUG
.....
     490     500     510     520     530     540
GGGAAAAGGUACCAACCCCCUGCCAGAGUCUUCGAAAUCAUUUGAGCAAUCCUGCCCUG
.....
     550     560     570     580     590
GUCAAUGGGUAAAGCACUUCGACCGCAAGCGUACUUAUGACCAGUUUAAG
.....
```

FoldRNA GCG format:

Length: 590 Energy: -70.1

1 U	0	2	0	1
2 A	1	3	0	2
3 U	2	4	0	3
4 U	3	5	0	4
5 A	4	6	0	5
6 U	5	7	0	6
7 C	6	8	0	7
8 G	7	9	0	8
9 U	8	10	0	9
10 G	9	11	0	10
11 U	10	12	0	11
12 G	11	13	0	12
13 C	12	14	0	13

14	A	13	15	0	14
15	G	14	16	0	15
16	U	15	17	0	16
17	U	16	18	0	17
18	A	17	19	0	18
19	A	18	20	0	19
20	A	19	21	0	20
21	A	20	22	0	21
22	U	21	23	0	22
23	U	22	24	0	23
24	G	23	25	0	24
25	A	24	26	0	25
26	C	25	27	0	26
27	U	26	28	0	27
28	U	27	29	0	28
29	U	28	30	0	29
30	U	29	31	0	30
31	U	30	32	0	31
32	A	31	33	0	32
33	A	32	34	0	33
34	U	33	35	0	34
35	G	34	36	0	35
36	C	35	37	0	36
37	G	36	38	0	37
38	G	37	39	0	38
39	C	38	40	0	39
40	U	39	41	0	40

...